

Page 73

(1) this being the most recent exposure, and looking at
(2) the time period during which the greatest exposures
(3) occurred, and looking at the significance of the
(4) exposure in terms of the height of the bar.

(5) We also have an event and activity summary
(6) output. So for each of those line item entries is a
(7) generation of report which looks at the individual
(8) activities and the inputs associated with that, as
(9) well as the specifically cited sources.

(10) And then finally we have a reconstruction
(11) summary output that looks at the significance of a
(12) particular exposure with respect to a product as well
(13) as the manufacturer. So through this process we can
(14) systematically compile a person's timeline, develop a
(15) work history through event, exposure event
(16) compilations, and output that information in terms of
(17) product type, period of time, or activity that was
(18) performed on those individual products.

(19) Well, that is a historic reconstruction.
(20) Let's talk about one that is a more contemporary one.
(21) In this particular case, an individual was putting in
(22) a fire annunciator system and didn't realize that the
(23) acoustical plaster that was on the ceiling was
(24) asbestos-containing. What the individual did was
(25) drill holes through the ceiling accidentally, and the

Page 74

(1) activity occurred for some period of time, and once
(2) it was discovered it was stopped, but nevertheless,
(3) the individual was very concerned in wanting to know
(4) when they were going to develop cancer as a result of
(5) having been exposed.

(6) Now as industrial hygienists, intuitively
(7) we know how to answer that question, but the
(8) objective here was to put some science and
(9) mathematics behind determining what the dose was of
(10) the event.

(11) And we can use the same process to be able
(12) to do that. We look at the construction incident as
(13) an exposure event. So this incident is the exposure
(14) event. It was composed of specific activities, in
(15) this case cutting through the ceiling. It was an
(16) activity that through interview was determined to
(17) have taken a specific amount of time. However, there
(18) was a range associated with the time. Well, I think
(19) it was at least this long and I don't think it was
(20) any longer than this. That defined the range of the
(21) time.

(22) The acoustical plaster was able to be
(23) sampled, it actually was inventoried as part of the
(24) building record, and so we knew what the material was
(25) composed of. We were able to compile then an

Page 75

(1) activity description of drilling the three-quarter
(2) inch holes into the ceiling. We knew what the — we
(3) knew it was a 15 percent chrysotile material. We
(4) knew that the person was working with the material.
(5) We knew that it took somewhere between 3 and 12
(6) percent of the day, an 8-hour day, 5 days a week,
(7) except it was 1 day that this activity occurred.

(8) We referenced back to a specific article
(9) since we weren't there to measure it. This is the
(10) article that was referenced. Having to do with a
(11) sprayed material, it seemed to be the closest fit to
(12) the description of the activity. And here is the
(13) link to that specific article.

(14) The calculated dose then from drilling a
(15) hole through the ceiling for the period of time that
(16) it was described to have taken was a minimum dose of
(17) .000002 fiber years.

(18) With that — when we go back to the first
(19) page where that is shown, it is too small to be able
(20) to be shown in the effective dose, but we were able
(21) to do a Monte Carlo analysis on that and demonstrate
(22) that based on the inputs, these variable inputs, that
(23) the range was between about 6 and 17 to the minus 6
(24) fiber years of dose associated with that specific
(25) event.

Page 76

(1) This is helpful in being able to
(2) communicate the significance of the event. Clearly
(3) it is not something we want people doing from a
(4) preventative standpoint, but when these occur, and
(5) they do occur, there is a mechanism to be able to
(6) reconstruct that event and communicate effectively
(7) with the individual about the significance of the
(8) event. We can do a similar summary on that as well
(9) as a detailed statistical analysis and a sensitivity
(10) analysis as well to determine whether it is a close
(11) fit.

(12) With that, I would like to thank all of
(13) you for your participation. We have some time for
(14) questions and answers. And I appreciate all of you
(15) showing up on the morning to participate in this
(16) experience.

(17) Are there any questions?

(18) Yes.

(19) MORTON CORN: Would you entertain a
(20) comment?

(21) FRED BOELTER: Please, Dr. Corn.

(22) MORTON CORN: I am Morton Corn, Professor
(23) Emeritus Johns Hopkins University.

(24) I think there is a very important
(25) philosophical component to discussing these

TRANSCRIPT OF PROCEEDINGS
June 27, 2002

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et al

Page 77

techniques, and I would like to briefly elaborate on that.

Retrospective exposure assessment had its roots in epidemiologic studies, and I was privileged to be involved in many of those early ones, where we worked with a cohort of workers to address the question, is there a dose response curve, and these studies involved 18,000 workers, 5,000 workers.

We had anchor points for exposure with time in the same facilities, and the challenge was to fill in the missing years and the missing exposures which could be correlated with technological change usually, and that became known as the job exposure matrix and retrospective exposure assessment. And the techniques were extraordinarily useful because they did, indeed, focus on some thresholds where disease was recognized by the epidemiologist. We did have to pool our data into classes to correlate, very low exposure, low exposure, medium, high. The data were not usually good enough for the individual correlation.

What we have been talking about today is not that. And I think that is science and is judged as science. We have been listening to that technique reversed in response to the legal arena. We have

Page 78

been asked to take retrospective exposure for an individual, not for a cohort, and to use the techniques developed for a cohort to answer questions in the legal arena in the dispensing of justice. And those questions are to be answered with a more likely than not, or a high degree of scientific uncertainty by the individual performing the exposure analysis. And the question is usually, since the — in the asbestos arena, the cohort studies have given us, I believe, a threshold for fibrosis, and a threshold for lung cancer, and a suggested threshold for mesothelioma. We are being asked was the exposure consistent with those guidelines, do we believe the exposure could cause the disease, because there is a lot of argument about what fibrosis is, and there is a lot of argument if the lung cancer is due to smoking or to asbestos. So the first question is, is the threshold passed.

Second question we are being asked with presentations given this morning is what is the assignment of damages, assuming that the disease is a manifestation of the totality of exposure.

In doing that, and I think we have heard some very good utilizations of the exposure assessment methodology, but I think we should be

Page 79

(1) aware that not only is this a science and an art, I
(2) think it is an art and a science. We have drawn on
(3) some of the science to persuade juries or judges of
(4) the answers to those two questions.

(5) We are using data for individuals not in
(6) those places where they worked. We all know the
(7) variability of the workplace. We have heard some
(8) point estimates which I think we just cannot give.
(9) The variability is essential to the data we assume,
(10) and it is even greater when you realize that data is
(11) not for the establishments for the individuals
(12) involved.

(13) So uncertainty is absolutely critical in
(14) all of this for the integrity of the presentation.

(15) I believe some of the methodologies given
(16) have the capacity to fool us with the specificities
(17) and the readouts of the computer. Bill, for
(18) instance, is drawing on assumptions that are hot
(19) arguments. Fiber type is still not accepted, Bill.
(20) And while I would agree with you, you have got a big
(21) persuasion argument with the assignment of factors.

(22) Peto's time analysis is still not totally
(23) accepted.

(24) The bottom line for what I am saying is,
(25) we are going to be faced in the courtroom with one of

Page 80

(1) us on one side and one of us on the other side
(2) presenting these arguments one to the pleasure of the
(3) Plaintiff and one to the pleasure of the defense, and
(4) the stakes are not only individual credibility but
(5) the credibility of our field. Do not oversell these
(6) methods.

(7) I think the progress I listened to here
(8) today was superb and I think some of it was literally
(9) the state of the art of doing this. But as the
(10) practitioners, we should recognize just how soft much
(11) of it is and that we are in an arena to persuade.
(12) This isn't science. Thank you.

(13) (Applause.)

(14) FRED BOELTER: Thank you. Do any of the
(15) panelists wish to comment?

(16) ALLEN ROGERS: Allen Rogers from
(17) Australia —

(18) FRED BOELTER: Excuse me just one minute.
(19) Just a minute. Dr. Fowler is going to have a
(20) comment, thank you.

(21) DOUG FOWLER: Dr. Corn's comments are
(22) similar to those that I have made in court under oath
(23) on occasion in that there is always grave uncertainty
(24) about attribution of exposure of individuals 40 or 50
(25) years ago when the only information about that

Page 81

(1) exposure that we have is the recollection of the
(2) individual as prompted by an attorney. And it is
(3) clear that we cannot have the same kind of certainty
(4) that we have with regard to measurements that we made
(5) yesterday when we are talking about our guesses, and
(6) they are guesses, rather than estimates, of what the
(7) exposures were 40, 50, 60 years ago.

(8) So, yes, your comments are entirely apt,
(9) Dr. Corn, and I agree with them.

(10) Now, having said that, I will say that
(11) this technology that has been shown to us by the
(12) other panelists here, the Monte Carlo methods, are
(13) very useful in giving figures of merit from which one
(14) can make reasonable assumptions about relative risks.
(15) You just have to be awfully careful not to have too
(16) many significant figures, and with asbestos
(17) measurement, maybe one significant figure is about —
(18) maybe two, sometimes, is about all you can hope for.
(19) But I agree. But, these techniques will help to
(20) focus and to make the argument more pointed.

(21) BILL DYSON: I would certainly agree with
(22) what you said, Mort, but I would point out that what
(23) the opposite argument is is that every exposure is
(24) significant and every exposure is contributory, and
(25) that just isn't the case always, and we have to have

Page 82

(1) some type of methodology for sorting that out, and
(2) the methodologies that have been presented here, at
(3) least, are useful in getting us into the appropriate
(4) ball game of sorting that out.

(5) MORT CORN: What worries me is the
(6) difference in the methodologies. It might be best if
(7) we could set a standard for ourselves that where this
(8) type of analysis is involved in a case, Plaintiffs
(9) and defense experts must agree. I think for the
(10) credibility of our field, if there could be one
(11) assessment that both experts agree on, it would be
(12) marvelous.

(13) JIM RASMUSON: All models are wrong. Some
(14) are useful, and I think when we can show many orders
(15) of magnitude of differences, and I think as Dr. Corn
(16) said, when we can be inclusive of both Plaintiff
(17) experts and experts for the defense, to the extent
(18) possible, I think all of that is going to help, but I
(19) think, as I indicated in the talk, recognizing the
(20) limitations of the methodology is just as important
(21) as recognizing the strengths of the methodology.

(22) (This concludes side 1. Please turn the
(23) tape over for a continuation of the
(24) presentation.)

(25) ALLEN ROGERS: — interesting in along as

Page 83

(1) what Mort said was that this great complicated Monte
(2) Carlo and computer analysis really produces a number
(3) which is very similar to cumulative exposure, very
(4) similar if you just took the mean of the results
(5) presented in the historical papers and then did your
(6) proportion of time. I am sorry to go to all the
(7) computer buffs and I am sorry to dispose of my son
(8) who studied computer science at the university,
(9) however, you get nothing — it goes to another factor
(10) that you really are getting not much out of a very
(11) small number.

(12) It is interesting to see most of the
(13) information provided today related to about three, if
(14) not at the most four scientific papers in the
(15) international literature.

(16) The stuff on the ladders was all Balzer
(17) and Cooper. And everything that has been done and
(18) through the courts, as far as I see, relies on some
(19) short 10-minute samples done a number of times in one
(20) particular work location.

(21) And the same on many of the other types of
(22) studies. The Harries study, you know, I have read
(23) his thesis and everything else, but it is very small
(24) amounts of numbers that people are making these
(25) massive extrapolation to many millions of work —

Page 84

(1) potentially many millions of workers based on some
(2) very short periods of exposure information.

(3) The data that you plug into these models
(4) and calculations is so limited that it makes the
(5) variability in the final extrapolation near
(6) impossible to determine its accuracy.

(7) Thank you.

(8) FRED BOELTER: I think your point is well
(9) taken on that, and frankly there isn't that much data
(10) out there historically pre 1970. There is a number
(11) of reasons for that, it wasn't required to be
(12) collected and it wasn't available, so there are a few
(13) number of places to go to gather that information.

(14) Your earlier point about using the mean
(15) value is well taken. But my view on doing this type
(16) of a dose reconstruction is really similar to a risk
(17) process using a tiered system. In a tier one
(18) analysis we can use default values, such as the
(19) means, and determine whether that seems adequate to
(20) answer the question that has been posed.

(21) If that analysis on a tier one is not
(22) sufficient, and we go to a tier two where we look at
(23) more specific information, that might relate to the
(24) activity or the event of interest. Absent that, we
(25) can go to a tier three analysis and go through all

APPENDIX FROM A JOURNAL OF
 27, 2002

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
 & EXPO 2002, et al

Page 85

this process clearly.

This level of taking the work history and a timeline and slicing up individual sections to ultimately calculate a dose associated with each event can't be done on (audiotape difficulties) and trying to analogize it to the situation that we are confronted with evaluating to ultimately opine about the significance. It has its application not only in litigation but also in nonlitigation, and it is a fundamental process, as Dr. Corn pointed out, in performing an epidemiologic study, but it is a technique where when necessary we can get into the information and try in some way to compile a numerical value associated with a dose, a historic dose, to determine its significance, generally in comparison to something else.

(Audiotape difficulties)

JIM RASMUSON: The industrial hygienist cannot be air monitoring every situation at all times. An industrial hygienist by instinct uses these techniques to try to prioritize exposures in the workplace.

I think what we are trying to present here simply a formalized approach (audiotape difficulties) only several, three or four literature

Page 86

ticles were the basis for this, literally thousands of our database. As Dr. Boelter mentioned, it is not a matter of time and for reasons of simplicity (audiotape difficulties) at the time is almost beside the point because what we are talking about is the exposure assessment process, which really deals with current exposures, future exposures. It is the basis, for example, setting priorities for cleaning Superfund sites and so on, and if industrial hygienists don't become more conscious of what they are doing relative to exposure assessment, I think the field will likewise suffer in the same manner as we try to attach too much significance to the work we do as well.

FRED BOELTER: Thank you. I actually took comment about the literature as being the published literature as opposed to the tremendous amount of information that is available, the published literature.

JIM RASMUSON: That is right. And, of course, there is a tremendous database of unpublished literature that most of us have access to as well.

FRED BOELTER: There was another question?

MIKE MILLER: Mike Miller from the Navy Environmental Health Center in Norfolk, Virginia.

Page 87

[1] I attended this session because we
 [2] frequently get inquiries from the Veterans
 [3] Administration about veterans who are filing
 [4] service-connected disability claims, and the question
 [5] goes sort of like this person was a fireman
 [6] apprentice on the USS whatever from the period of
 [7] 1940 to 1942, can you comment on his exposures. And,
 [8] of course the answer to that is no.

[9] So I was fascinated to see that you
 [10] somehow have attached some numbers to those exposures
 [11] and I am just curious as to, for instance, the
 [12] boiler, Navy boiler tender exposure of .1 fibers per
 [13] cc, where that number came from, because I am pretty
 [14] sure that at least within the Navy that data doesn't
 [15] exist and it was never collected.

[16] You know, I am an industrial hygienist but
 [17] I am also the son of a World War II Navy veteran who
 [18] died way too young of lung cancer, so my sympathies
 [19] are, indeed, with these veterans who deserve every
 [20] penny if it is, indeed, a service-connected
 [21] disability, and I would love to be able to answer
 [22] these questions with some degree of certainty and
 [23] science, as Dr. Corn pointed out, but it just occurs
 [24] to me that the models are based on certain
 [25] assumptions being plugged in at the front end and,

Page 88

[1] not being a lawyer, but my supposition would be that
 [2] the assumptions are nothing more than speculation, so
 [3] the result at the other end of the equation can be
 [4] nothing more than speculation.

[5] I am wondering what kind of legal veracity
 [6] it has in a courtroom or when filing a claim?

[7] BILL DYSON: Well, obviously I do have a
 [8] basis for that number. There were a series of
 [9] studies done in the James River Reserve Fleet by
 [10] Illinois Institute of Technology that gave us a range
 [11] of numbers that went from .00X up through .3, and
 [12] don't get hung up on the fact that I am using a
 [13] single point estimate for this, that was just for
 [14] illustrative purposes. There are also a large series
 [15] of studies that have been done on commercial ships,
 [16] actual measurements that have been made, various
 [17] activities on commercial ships by several of the oil
 [18] companies; for example, and furthermore, there is
 [19] actual testimony before a congressional committee by
 [20] a representative of the Navy who used that very same
 [21] number, 0.1, saying that people had not been exposed
 [22] above that number.

[23] So these numbers come from a wide variety
 [24] of sources, they are not pulled out of the air at
 [25] all.

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et al

TRANSCRIPT FROM AUDIOTAPE
June 27, 2002

Page 89

(1) JOHN SPENCER: I will also add I was
(2) formally with the U.S. Coast Guard as their
(3) industrial hygienist and we had a small shipyard
(4) facility, albeit not the naval size shipyards, but my
(5) role was also working with the medical people and the
(6) occupational medical monitoring program, and then
(7) also their workers' comp related issues, and we had a
(8) lot of data in the Coast Guard, and I know the Navy,
(9) I have done foyer requests from the Navy and gotten
(10) similar data on various specific activities based —
(11) and looking at trades and activities as to what the
(12) levels of exposure were when they were doing some of
(13) the activities that we had described here, removing
(14) pipe insulation or working on boilers.

(15) That data is out there, and I used it when
(16) I was with the Coast Guard in determining the levels,
(17) the overall dose and levels of exposure for Coast
(18) Guard employees.

(19) DOUG FOWLER: There is similar information
(20) available from Pudget Sound Naval Shipyard and Mare
(21) Island Naval Shipyard, but that information is
(22) typically for shipyard tasks as opposed to shipboard
(23) tasks, and we don't know very much about what typical
(24) exposures were in engine rooms, boiler rooms, and
(25) other machinery spaces aboard ship.

Page 90

(1) There have been a few pieces of
(2) information as studied by Jones at Illinois Institute
(3) of Technology Research Institute is about the only
(4) one, and as I recall, they did one measurement — I
(5) will take it back — three measurements in a boiler
(6) room of a merchant ship underway.

(7) You know, we are talking about three
(8) numbers, and that is what we have to base it on
(9) because that is all we have.

(10) So there is a real paucity of information
(11) with regard to conditions aboard ships while underway
(12) and especially with regard to conditions in boiler
(13) rooms while firing or receiving fire, and that kind
(14) of information is just simply not known. But there
(15) is a lot of information about shipyard activities.

(16) FRED BOELTER: The other thing to remember
(17) is when doing a dose reconstruction, often we are
(18) working with the information that people say that
(19) they did and drawing analogies from that, so it is
(20) not a job description of strictly a machinist mate,
(21) it is the descriptions of that individual saying what
(22) they did while they were performing their activities.

(23) I am unfortunately going to have to call
(24) the end of this session and we will be around if you
(25) have questions. Feel free to come up and speak with

Page 91

(1) us. I really appreciate all of you turning out for
(2) this event and look forward to continuing to develop
(3) this information. Thank you.

(4) (Applause.)

(5) (End of audiotape.)

Page 92

(1) CERTIFICATE

(2)
(3)
(4) STATE OF GEORGIA:
(5) COUNTY OF FULTON:

(6)
(7)
(8)
(9) I hereby certify that the foregoing
(10) hearing was transcribed from tape and
(11) reduced to typewriting under my direction,
(12) and that the foregoing pages 1 through 91
(13) represent a true, complete, and correct
(14) transcript of said tape transcription.
(15) This, the 28th day of June, 2002.

(16)
(17)
(18) Frances Buono, CCR-B-791.

(19) My commission expires the
(20) 25th day of April, 2003.

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
EXPO 2002, et al.TRANSCRIPT FROM AUDIO TAPES
June 27, 2002\$
\$10 million 57:5O
O 47:22; 52:8
0.005 30:17
0.1 40:12; 88:21
0.7 63:7
000002 75:17
005 30:13; 51:24
006 51:24
00X 88:11
01 38:4, 4; 40:17
02/Forum 54:12
05 49:161
1 12:16; 38:4, 4, 4; 40:1,
12, 18; 41:16; 42:14; 48:6,
16; 49:9; 54:10; 58:20;
59:22; 63:22, 24; 75:7;
82:22; 87:12; 92:12
1-to-5 46:8
1/1,000ths 15:2
10 14:11; 25:23; 43:1, 4,
9; 47:17, 23; 48:14, 18, 25;
60:2; 62:5, 5, 10; 63:4
10,000 52:8
10-minute 83:19
10-year 62:24
100 14:11; 49:4; 63:22
114 23:7
12 57:10; 75:5
1200 70:18
135 29:14
15 43:5; 68:22; 75:3
16 23:7; 27:25; 28:16, 23
17 75:23
17,000 22:18
18,000 77:8
180 30:11
1933 43:21
1940 87:7
1942 87:7
1944 59:4
1946 59:4
1950 43:24; 59:10
1955 59:8
1958 9:19
1960 59:5, 10
1960s 48:3
1961 59:8
1962 9:20
1970 13:10; 84:10
1970s 22:4
1973 3:4
1975 44:161979 43:25
1980 44:16, 19
1983 5:9
1985 3:5; 5:11, 18
1988 60:20
1989 5:13
1996 11:1; 15:6
1999 43:222
2 10:17; 13:4, 19; 41:22,
24; 42:15; 49:16; 50:4;
54:11, 13; 57:5, 10; 59:24
2-year 59:23
2.2 12:20
20 5:5; 40:2; 41:24; 43:3;
44:17
20,000 45:16
200 13:22
2000 61:12
2002 2:4; 92:15
2003 92:19
2200 29:25
2200-day 30:10
239 13:12
24 71:7, 20
240 29:3, 4
244 2:6; 54:12
25 12:24; 42:14; 44:17;
48:13, 18
250 12:25; 22:20; 66:16,
17
2500 57:2
25th 92:19
27 71:17
28th 92:15
29 71:203
3 13:15, 19; 46:9; 48:2, 5,
19; 75:5; 88:11
3,000 57:3
3.1 12:19, 20
3.2 11:2
3.3 12:20
3.5 61:5
3.7 11:3
30 41:16; 71:20
35 43:2
365 29:3, 4
37 13:134
4 28:22, 24; 62:21
4.9 12:20
40 47:4; 57:7; 80:24; 81:7
43 48:645 28:25; 29:3, 13; 44:18;
47:5
47 13:135
5 12:14, 17; 24:8; 25:22;
28:11; 47:18; 48:13, 16,
24; 58:20; 59:3; 60:3;
68:22; 69:19; 75:6
5,000 77:8
5.9 29:15, 16, 24
50 13:22; 20:18, 22, 23;
41:22; 47:18, 22, 24;
48:14; 49:4; 57:7; 60:3;
63:5; 80:24; 81:7
500 63:256
6 29:5, 13; 75:23, 23
6-year 29:23
60 5:4; 81:7
61 59:5
65 43:22
650 11:27
7 28:3, 6; 52:8
7.4 30:16
7400 20:14; 21:1
7402 20:15; 21:2
75 43:38
8 28:3, 10; 49:8; 62:10
8-hour 75:6
85 43:4; 44:69
9 13:16
90 44:6; 71:18
91 92:12
92 5:16, 17
95 50:3, 6, 10; 71:18
97 49:9A
ability 23:19
able 2:7; 35:21; 39:8;
66:7; 74:11, 22, 25; 75:19,
20; 76:1, 5; 87:21
aboard 22:10, 15; 27:25;
30:6, 21; 89:25; 90:11
above 14:4; 88:22
absence 7:8; 33:6Absent 84:24
absolute 61:25
absolutely 79:13
absorption 54:25
Academy 3:11; 5:6;
40:20
acceptable 4:23
accepted 4:21; 20:12;
79:19, 23
access 86:22
accidental 4:14; 56:6
accidentally 66:2; 73:25
accordingly 69:13
account 37:13; 38:7;
41:3, 4, 4, 6, 14; 45:18, 21;
54:25
accumulation 71:10
accuracy 33:12; 53:5,
11, 16, 22; 54:17; 55:13,
17; 84:6
accurate 55:3, 4, 12
ACGIH 2:1
acknowledges 61:6
Acme 51:19
Acme-related 52:5
ACMs 36:24
acoustical 73:23; 74:22
activities 10:15; 17:24;
27:9; 52:20; 67:2, 11, 12,
14, 17, 21; 68:1; 69:1;
70:21; 73:8; 74:14; 88:17;
89:10, 11, 13; 90:15, 22
activity 4:18; 5:21; 6:14;
8:22; 9:5, 22; 29:7; 45:25;
67:15; 68:2, 6; 69:3, 5;
70:7, 8, 13; 72:11, 17;
73:5, 17; 74:1, 16; 75:1, 7,
12; 84:24
actual 12:1; 19:9; 27:7;
88:16, 19
actually 17:17; 22:13;
23:25; 24:20; 25:6; 26:25;
34:1, 15; 43:18; 51:20;
69:25; 74:23; 86:15
add 30:14, 15, 19, 20;
89:1
added 29:25; 35:6; 71:5
adding 30:18
addition 56:5
additional 46:12
additive 29:22
address 77:6
adequate 65:13; 84:19
adjust 69:12, 13
adjustable 11:7
adjusted 69:24
Administration 87:3
adopt 35:16
aerospace 9:14
Again 13:3; 18:1; 21:2,
16; 23:10; 24:23; 25:18;
26:3, 8, 13; 27:23; 28:2, 9,
11; 29:6; 30:4; 31:25;
39:17; 47:21; 48:15; 49:7;60:2; 61:13, 17; 62:11;
63:4
against 6:24; 15:7; 30:24,
25
age 7:13; 43:22
agencies 16:4
Agency 5:15
ago 10:8; 14:17; 80:25;
81:7
agree 79:20; 81:9, 19, 21;
82:9, 11
AIHA 2:1, 11; 3:12; 18:16
AIHce 54:12
air 11:3, 7, 10, 12; 15:3;
19:5; 20:7; 21:8; 39:7, 16;
42:2; 85:19; 88:24
airborne 12:2, 5; 23:20
albeit 89:4
all-day 69:5
Allen 7:16; 80:16, 16;
82:25
allow 70:11
allowed 48:4, 6; 49:8
allows 31:8; 35:13; 45:8,
13; 46:2; 52:4
almost 22:17; 23:7;
33:19; 50:14, 16, 25;
59:20; 71:20; 86:4
alone 60:13; 65:4
Along 70:23; 82:25
alternate 42:4
alternative 48:3
although 13:22; 14:6
always 18:3; 19:22; 21:2;
35:17; 36:21; 80:23; 81:25
ambient 15:1
American 2:3; 3:11, 19,
21; 18:12
among 19:21
amosite 22:17, 23; 23:17,
18; 54:4; 63:23; 64:17;
68:11
amount 22:13, 25; 30:1;
68:20; 72:18; 74:17; 86:18
amounts 23:16; 83:24
amphibole 61:4
analogies 90:19
analogize 7:7; 85:6
analogy 50:20
analysis 4:12; 13:1, 11;
20:4, 19; 21:9; 29:9; 31:12;
33:9; 35:4; 51:2, 14, 17;
52:9; 53:12, 15; 56:1, 2;
59:14; 60:7, 17; 71:9, 15,
25; 72:2, 7, 10, 23; 75:21;
76:9, 10; 78:7; 79:22; 82:8;
83:2; 84:18, 21, 25
analytical 3:22; 14:9;
19:17, 20; 20:9
analyzed 12:12; 13:2
analyzing 71:10
anchor 77:9
announcement 7:12
annual 68:25

(1) \$10 million - annual

MANUSCRIPT FROM AUDIO TAPES
line 27, 2002

AMERICAN INSTITUTE FOR HYGIENE CONFERENCE
& EXPO 2002, et al

inunciator 73:22
swered 78:5
tithesis 50:25
ologize 64:9
plause 15:21; 56:11;
17; 80:13; 91:4
plicable 7:8; 57:18, 19
plication 4:12; 45:4, 6,
19; 60:8; 62:14; 85:8
lications 4:14
plied 10:1; 14:17;
17; 31:18; 33:8; 61:9
ply 20:23; 32:7; 34:13;
5
plying 45:22; 61:3;
12; 64:7
preciable 44:9
preciate 76:14; 91:1
rentice 44:13; 58:25;
;
roach 29:20; 31:9,
32:8; 85:24
ropriate 15:19;
7; 31:18, 19; 82:3
roximately 9:19;
8
il 92:19
31:8
12:22; 13:3, 17;
5; 34:11; 36:10;
5; 43:12
s 18:22; 19:24; 43:14
a 3:4; 77:25; 78:4, 9;
l
e 46:16
ment 28:20; 78:15,
9:21; 81:20, 23
ments 79:19; 80:2
13:8
ng 10:18; 12:2
36:10, 11, 11
nd 5:3; 17:7, 22;
; 44:17; 46:9; 56:25;
; 68:17; 90:24
1, 2; 80:9
= 49:11; 63:20; 75:8,
as 3:18; 86:1
stos 2:2, 5; 6:19;
8, 9, 11, 15; 9:15,
17; 14:25; 15:1, 14;
3, 15; 20:5, 7;
22:17; 23:16; 24:9,
3, 6; 31:4; 33:1;
37:1; 41:6, 25;
17, 44:20, 24; 45:1;
49:7; 52:3, 7; 53:25;
7:9, 20; 58:17; 59:6,
1, 18, 22; 61:1, 18;
18; 64:13; 66:1, 23;
7, 81:16
os-containing
2:24
os-related 58:1
osis 57:20; 65:7

aspects 3:24
assemblies 22:20
assessing 60:21
Assessment 2:11, 14;
4:11, 14; 5:1, 8, 8, 10, 17,
20, 20; 18:2, 10, 14, 18;
19:1; 21:7, 10, 13; 23:23;
32:5; 34:3; 38:11; 40:21;
50:18; 52:10, 11, 12; 53:9,
10; 54:24; 55:2; 56:3; 58:7;
60:16; 61:21, 23; 65:12,
20; 77:3, 14; 78:25; 82:11;
86:6, 11
assessments 16:8; 17:1;
22:5; 23:12; 38:20; 54:20
assign 34:7; 38:14
assigned 30:3
assigning 18:7
assignment 10:14;
78:21; 79:21
associated 15:13; 44:22;
45:10, 11; 53:7; 58:17;
66:4, 5; 67:18; 70:23;
71:11, 12, 12; 72:4; 73:8;
74:18; 75:24; 85:4, 14
Associates 3:14
Association 3:19; 18:13;
29:18; 45:14
assume 17:20; 57:6; 79:9
Assuming 10:22; 46:6;
78:21
assumptions 6:7; 46:10;
47:7; 50:2; 53:7, 12; 79:18;
81:14; 87:25; 88:2
ASTM 5:18
ATSDR 5:16
attach 86:13
attached 87:10
attended 87:1
attention 34:21
attorney 81:2
attorneys 7:22; 35:18, 20
attributable 57:16; 58:3;
60:14
attribute 57:21; 60:13;
64:14
attributed 23:15; 59:22;
63:6
attributing 65:5
attribution 4:16, 19;
65:6; 68:6; 70:1; 80:24
attributions 59:25
audience 7:14
audiotape 85:5, 17, 24;
86:4; 91:5
Australia 80:17
authored 4:1
automotive 20:1
AV 2:17
available 2:12; 24:3;
26:10; 44:4; 84:12; 86:18;
89:20
average 12:20; 13:21;
28:16, 19, 23; 40:13; 43:8;
46:5, 5; 48:2; 49:17; 61:5;

62:23, 25; 63:7; 69:21, 23
averaged 54:21
averages 26:23
avoid 35:24
award 4:2
aware 8:17; 79:1
away 16:10; 41:19, 19;
42:14; 43:1, 3, 4
awfully 81:15
awhile 33:22

B

back 2:12; 6:7; 11:7; 18:3;
23:11; 42:18; 57:13, 14,
14; 64:9; 65:21; 70:20;
72:12, 15; 75:8, 18; 90:5
background 25:25; 30:3,
7, 51:23
backup 20:15
backwards 18:7
ball 82:4
ballpark 13:3
Baltimore 4:7
Balzer 7:15; 10:8; 13:9;
48:1; 49:7; 83:16
Balzer's 23:2
band 8:21; 9:17; 10:10;
11:4, 5, 11, 17; 12:19;
13:9, 20; 14:3, 8, 14
bar 19:24; 26:20; 73:4
Barbara 7:17
base 90:8
based 4:11; 5:20, 23;
6:13, 17; 14:13; 17:18;
21:20; 28:11, 20; 30:8;
39:24; 57:16; 58:8; 60:7,
16; 61:11, 17; 65:3; 69:24;
75:22; 84:1; 87:24; 89:10
basic 51:4
Basically 8:6; 18:21;
20:25; 34:6; 35:24; 38:13;
39:20; 45:8; 46:21
basis 10:10; 37:20;
49:17; 59:18; 60:12;
67:24; 70:11; 72:22; 86:1,
8; 88:8
became 44:14; 58:25;
77:13
become 23:19; 64:8;
86:10
becomes 64:8
becoming 44:15; 55:21
begin 47:2; 63:8; 68:19
beginning 2:10; 33:16
behalf 7:22
behind 74:9
benzene 29:18; 32:1
Berkeley 3:16
beside 86:4
best 18:8; 36:18, 21;
37:11; 46:24; 50:20;
63:19; 82:6

better 34:20; 35:21; 36:1;
39:11; 52:21; 59:19
beyond 23:4; 56:22;
57:16
biasing 36:2
big 11:16; 79:20
bigger 14:7
biggest 39:4; 61:15
Bill 3:6; 56:13, 14; 79:17,
19; 81:21; 88:7
billion 57:11
Birkner 2:23; 32:16
bit 8:12; 33:13; 39:24;
40:10; 56:18, 21; 57:16
bites 59:20
block 10:2, 5, 11
blue 50:4, 7
Board 3:22; 22:25; 28:7;
29:25; 30:4; 31:1, 4; 43:13;
59:6; 62:18; 64:13
bodies 54:5
body 54:1, 25; 55:6
BOELTER 2:22; 3:1;
15:22; 26:16; 27:3; 32:13;
56:12; 65:18; 76:21;
80:14, 18; 84:8; 86:2, 15,
23; 90:16
boiler 22:21; 51:20; 59:3;
87:12, 12; 89:24; 90:5, 12
boilers 89:14
Book 5:9; 18:12, 15
born 43:21
bosses 7:18
both 3:23; 12:25; 14:1;
22:23; 53:15; 55:22;
82:11, 16
bottom 46:4; 48:8, 8;
49:16; 79:24
bought 10:25; 11:1, 4;
14:20; 24:7
bound 23:20
box 15:10; 39:14
brakes 20:1, 1
brand 13:16
brands 13:15
breathing 13:18
Bremerton 22:3; 26:20
brief 8:10
briefly 34:3; 45:8; 77:1
British 23:9
broad 37:10, 10; 49:24;
50:1
broader 50:15
broadness 50:2
brochure 2:16
broken 18:21
brushing 24:24, 25;
26:15
buffs 83:7
Build 7:4
building 24:8; 42:19, 24;
44:11, 11; 59:6; 66:10;
67:25; 74:24

buildings 66:1
buildup 43:13
built 11:1; 66:7; 71:21
bulk 20:3
Buono 92:18
burden 13:23
bystander 37:2; 38:7;
42:8; 43:18; 47:15, 18;
48:14; 49:3
bystanders 46:19

C

cable 67:19
calcium 10:2, 10; 12:6;
13:15; 14:10
calculate 13:23; 17:18;
25:20; 34:16; 56:25; 85:4
calculated 6:4; 7:9; 62:6,
20; 75:14
calculating 65:23; 70:24
calculation 6:9; 57:17;
59:16; 66:18; 72:22
calculations 22:12;
37:21; 64:20; 69:14; 84:4
calendar 66:16
call 10:20; 21:7; 31:10;
51:19; 70:17; 71:6; 90:23
called 6:21; 11:22; 14:21;
60:17, 21; 66:12; 71:4
CAM 13:12
came 9:8; 15:10; 47:17;
51:19; 58:24; 87:13
can 10:12; 11:6; 19:20;
22:24; 27:18; 31:23, 25;
32:7, 9; 33:5, 8; 34:19, 20;
35:2; 36:15, 20; 37:4;
38:16, 18, 22; 39:2, 11, 16,
24; 40:6, 9, 13, 19; 41:11;
42:3, 12, 25; 43:3, 4, 12,
15; 45:20; 46:7, 24; 47:2;
48:21; 49:6, 14, 18, 20;
50:3, 12, 20; 51:1; 52:4, 7,
12, 17, 18; 53:2; 58:15;
59:19, 20; 64:1, 10; 65:1;
70:5, 15, 17, 22; 71:9, 23;
72:11, 14, 15; 73:13;
74:11; 76:8; 81:14, 18;
82:14, 16; 84:18, 25;
85:12; 87:7; 88:3
cancer 43:22; 54:23;
57:19; 65:7; 74:4; 78:11,
16; 87:18
capacity 79:16
careful 35:2; 38:23; 39:1;
47:1; 81:15
carefully 72:16
Carl 25:23
Carlo 33:5; 45:7, 8, 13;
46:1; 49:19; 51:3, 16; 52:3;
53:24; 56:1; 59:14; 71:9,
15; 75:21; 81:12; 83:2
Carmel 27:3
carpenter 59:1
carpenter's 58:25

AMERICAN INDUSTRIAL ENGINEERING CONFERENCE
& EXPO 2002, et al

JUNE 27, 2002

carried 29:6, 22
 carry 16:15
 case 8:20; 10:6, 23;
 11:23; 13:7; 15:11, 17;
 18:9; 24:5; 28:5; 31:10, 12;
 41:7, 21, 21; 42:22; 43:20;
 45:7, 9; 46:10; 48:23; 53:3;
 58:15, 23; 59:17, 17; 60:2;
 61:9, 10; 62:18, 21; 64:2;
 67:7, 12; 69:18; 71:6, 17;
 72:10; 73:21; 74:15;
 81:25; 82:8
 cases 18:8; 39:10; 56:23;
 57:1, 3, 5; 65:6, 7, 13, 19
 catching 17:10
 categories 38:1, 3;
 59:21; 68:11
 categorization 40:19
 category 63:24
 cause 58:2; 63:16; 78:14
 caution 19:23; 21:3, 16;
 23:12, 21; 39:18
 cc 12:14, 21; 13:4, 20;
 20:19; 23:7; 28:17, 24;
 30:13; 40:2, 12, 18; 46:8,
 9; 48:2, 5, 6, 17; 49:17;
 51:24; 58:20; 59:23, 24;
 60:3, 5; 62:21, 23; 87:13
 CCR-B-791 92:18
 CDC 55:7
 ceiling 67:21; 73:23, 25;
 74:15; 75:2, 15
 cellulose 20:21; 31:5
 cement 22:14, 18; 44:24;
 59:6, 9; 61:18; 62:18;
 64:13
 center 50:7; 86:25
 central 46:8; 48:18
 certain 36:4; 63:18;
 87:24
 certainly 16:9, 11; 17:6;
 18:19; 28:19; 57:19; 81:21
 certainty 4:23; 81:3;
 87:22
 CERTIFICATE 92:2
 Certified 2:24, 25; 3:2, 6,
 13, 20, 23; 4:4, 5
 certify 92:9
 cetera 37:3; 38:5; 46:19
 challenge 77:10
 chamber 11:2, 4, 6, 10;
 14:7; 24:20; 25:13
 chambers 22:6
 change 47:22; 64:21;
 77:12
 changed 15:12, 14;
 16:11; 17:8, 12
 changes 11:3
 characterizes 36:23
 characterizing 18:22
 chart 46:4; 64:7; 67:5;
 68:1; 72:12
 cheek 60:21
 chemical 3:8, 23; 17:11
 chemistry 3:23

Cheng 26:21
 Children 4:3
 chosen 56:20
 chronological 72:25
 chrysotile 22:24; 54:3, 3;
 55:23; 61:4; 63:23, 25;
 64:14; 68:11; 75:3
 chunks 11:16
 Cincinnati 2:15
 cited 73:9
 claim 57:8; 88:6
 Claims 27:20; 87:4
 class 2:20
 classes 77:18
 clean 25:6
 cleaning 67:20; 86:8
 cleanup 45:12, 19
 clear 81:3
 Clearly 6:4; 15:17; 21:9;
 32:10; 69:5; 76:2; 85:1
 clicking 70:16
 clients 16:24; 51:18
 close 51:23; 76:10
 closest 75:11
 clothing 25:8, 14
 cloths 40:9
 Coast 4:8; 16:23; 21:23;
 26:5; 89:2, 8, 16, 17
 Code 54:12
 cohort 77:6; 78:2, 3, 9
 Cohrsen 7:17
 colleagues 7:15
 collected 21:19; 84:12;
 87:15
 column 29:21
 combine 45:17; 46:2
 comfortably 11:17
 coming 23:2; 54:16
 comment 76:20; 80:15,
 20; 86:16; 87:7
 comments 80:21; 81:8
 commercial 44:6; 48:1;
 88:15, 17
 commission 92:19
 Committee 2:11, 14;
 88:19
 common 32:8; 36:5
 commonly 23:8; 60:17
 communicate 66:4;
 76:2, 6
 communication 56:7
 community 4:22
 comp 89:7
 companies 88:18
 compare 10:7; 13:6, 7;
 19:20; 21:14; 30:24; 51:9,
 10; 55:18
 compared 6:24; 25:16;
 53:1
 comparison 51:11;
 85:16
 comparisons 52:13

compilations 73:16
 compile 73:14; 74:25;
 85:13
 compiling 72:21
 complete 51:14; 92:13
 complex 44:12
 complicated 8:4; 83:1
 component 71:22; 76:25
 components 65:14
 composed 74:14, 25
 composition 68:9
 compound 45:4
 comprehensive 3:24
 computed 22:13
 computer 2:20; 79:17;
 83:2, 7, 8
 concentration 5:21;
 6:10, 13; 70:12; 71:12, 24
 concentrations 12:19;
 13:8, 21; 14:14; 15:1; 43:7;
 68:17
 concept 51:8; 66:3
 concerned 17:7, 10; 74:3
 conclude 14:9, 12; 60:8;
 65:3
 concluded 14:1, 18, 24
 concludes 25:1; 54:10;
 82:22
 conclusion 15:15
 conclusions 10:21;
 33:19; 39:17
 condition 42:23
 conditions 14:6; 15:12;
 22:6; 26:2; 42:13; 90:11,
 12
 conducted 21:25; 22:3,
 5; 30:5
 Conference 2:3
 confidence 41:12; 50:4,
 11; 53:18; 71:18, 19
 confined 43:12, 14
 confronted 85:7
 confusing 38:25
 congressional 88:19
 conjunction 17:25
 conscious 86:10
 consequence 8:9
 conservative 43:16
 consider 27:24
 considerations 19:16
 considered 65:12
 considering 50:2
 consistency 26:18
 consistent 52:23; 78:13
 constantly 25:10
 construction 32:23;
 44:7, 8; 59:12; 74:12
 consultant 9:10
 consultants 33:20
 consulting 3:5; 16:6;
 35:13
 contain 5:14; 67:6
 contained 23:16; 67:10

contains 5:11
 contaminant 6:15
 contemporary 65:25;
 73:20
 contended 8:23
 content 70:13
 contents 34:13
 continual 42:15, 17
 continually 55:16
 continuation 25:2;
 54:11; 82:23
 continue 16:25; 56:19
 continuing 91:2
 continuous 62:17
 contrast 12:13
 contribute 9:5; 50:24;
 61:8
 contributed 8:24
 contribution 17:2; 27:8;
 31:3, 24; 57:23; 58:4; 60:6;
 65:14
 contributions 32:3
 contributor 61:15; 63:11
 contributors 64:22, 23
 contributory 81:24
 control 14:25; 15:16;
 18:17; 25:12, 13
 controlled 22:6; 27:5, 5
 controls 6:15; 14:19;
 15:5; 19:13; 27:1
 conventional 10:3
 cooling 59:6
 Cooper 13:9; 48:1; 49:7;
 83:17
 CORN 76:19, 21, 22, 22;
 81:9; 82:5, 15; 85:10;
 87:23
 Corn's 80:21
 correctly 29:16
 correlate 4:24; 54:2;
 77:18
 correlated 77:12
 correlation 54:18; 55:11;
 77:21
 cotton 20:21; 25:8
 count 20:16; 22:22
 country 7:3; 17:6; 56:24;
 57:4
 COUNTY 92:5
 couple 13:17; 14:17
 course 8:19; 9:25; 10:7;
 12:1; 40:6, 13; 54:2; 60:9;
 62:4; 86:21; 87:8
 courses 3:15
 court 80:22
 courtroom 79:25; 88:6
 courts 83:18
 cover 35:3; 41:22; 51:13
 coveralls 25:7
 covered 41:17
 covering 41:13; 44:9
 Coworker 44:4-
 create 38:19

credibility 80:4, 5; 82:10
 critical 65:9, 10; 79:13
 crocidolite 44:1; 63:25;
 68:11
 cubed 64:5
 cubic 11:2
 cumulative 29:15, 19;
 30:12, 19, 23; 58:16; 60:4;
 70:9; 71:5, 20; 83:3
 curious 87:11
 current 14:4; 86:7
 curve 77:7
 cut 9:17; 10:2; 11:12, 14,
 16; 24:21; 58:7
 cutting 9:3, 4; 10:15, 18;
 11:25; 12:1, 6, 9, 16;
 52:18; 59:5, 9; 62:18;
 64:13; 67:19, 20; 68:4;
 69:4; 74:15

D

daily 69:1
 damages 78:21
 danger 34:23
 Darrington 63:21
 data 5:23; 7:6, 6, 8; 18:5;
 19:8, 21, 23; 20:2, 3, 6, 17;
 21:4, 17, 18, 19, 24; 22:4,
 7; 23:1, 3, 5, 8, 9, 13, 22,
 24, 25; 26:9, 19; 27:10;
 30:5, 7, 8, 17, 19; 31:11,
 18; 33:7, 17, 18; 37:12;
 39:11, 23; 40:23; 41:4;
 43:17; 48:21; 50:5, 6; 51:5;
 54:8, 9, 9; 55:11, 14;
 58:14; 59:13, 15; 70:10;
 77:18, 19; 79:5, 9, 10;
 84:3, 9; 87:14; 89:8, 10, 15
 database 70:17, 19; 86:2,
 21
 databases 38:15
 date 66:13, 13, 16
 dates 37:14
 day 8:22; 27:21, 21, 22,
 24, 25; 28:3, 10, 22; 46:6;
 48:24; 68:20, 22; 69:2, 3,
 6, 9, 10, 17, 22, 24; 75:6, 6,
 7; 92:15, 19
 day's 9:22
 days 27:16; 28:3, 6, 11;
 29:1, 13, 13, 14, 25; 30:11;
 48:23; 66:14, 16, 17;
 69:16; 75:6
 deal 49:6; 57:11
 dealing 33:4; 40:15
 deals 16:21; 86:6
 debris 11:12
 decay 55:6
 default 66:14; 84:18
 Defendants 8:14; 9:2;
 35:19
 defense 80:3; 82:9, 17
 define 17:21; 36:23
 defined 5:4; 27:15; 66:24;

(5) carried - defined

TRANSCRIPT FROM DEPOSITION
June 27, 2002

AMERICAN REPORTING, INC. CONFERENCE
& EXPO 2002, et al.

1; 74:20
affines 18:17
agree 4:23; 41:12;
5:23; 55:4; 78:6; 87:22
agrees 3:9
demonstrate 33:3; 75:21
dependence 42:1
pending 68:18
position 12:5; 34:25;
9:67:8, 9
positions 44:3, 4;
22
spot 24:7
normal 54:24
scribe 7:21; 27:19
scribed 10:16; 27:11;
4:75:16; 89:13
scription 28:12;
11; 37:15; 68:5; 75:1,
90:20
scriptions 19:8; 90:21
scriptors 36:5; 47:15
serve 87:19
signed 33:25
sired 14:24
ail 29:10; 44:2
ailed 76:9
ails 34:21
ermine 10:17; 12:10;
22; 16:18; 20:4, 6; 34:6;
53:19; 55:5; 57:22;
4; 66:3; 76:10; 84:6,
35:15
ermined 11:21; 35:9;
6
ermine 53:14
ermining 66:15; 74:9;
6
elop 20:16; 66:21;
4; 74:4; 91:2
eloped 8:8; 43:22;
78:3
eloping 36:3
ation 49:20; 50:21;
ations 49:12
rosis 60:24; 61:11
87:18
ence 16:19; 21:10;
53:4; 55:21; 62:13;
ences 10:13;
38:7; 68:13; 82:15
ent 7:2; 12:12;
15, 17; 14:8, 8;
8:22; 23:15; 26:23;
32:2, 2, 3, 25;
12; 36:4; 37:5, 23;
42:23, 23; 47:4;
2; 62:15, 16; 63:17;
entiate 16:13, 18;
3; 31:2; 32:10
lt 17:13

difficulties 2:19; 85:5,
17, 25; 86:4
dilution 41:5
dioxin 54:20; 55:6
dioxin-containing 36:7
Diplomat 3:21
direct 12:25
directed 9:18; 42:21;
69:3
direction 92:11
directions 36:4
directly 7:8; 27:19
disability 87:4, 21
discovered 74:2
discrete 66:12
discuss 33:7, 11
discussed 33:25; 40:4;
66:9; 68:12
discussing 76:25
disease 4:16, 18; 5:16;
8:25; 9:6; 53:1; 58:1, 2;
77:17; 78:14, 21
dispensing 78:4
dispose 83:7
distance 41:5; 47:21
distinction 31:7, 8
distinguished 7:14
distribution 6:23; 45:10,
11; 46:3; 48:5, 7; 49:15;
50:5; 71:16
distributions 45:9, 15;
46:2, 6; 49:21, 22
disturbance 44:20
disturbances 4:15
divide 51:15; 52:2, 5
divided 29:3; 62:20, 22
dividing 38:2; 62:24
doctoral 3:9
document 37:18
documentation 19:11
dollars 57:11
done 7:21; 9:8, 21; 10:9;
14:19; 19:12, 22; 21:20;
22:2, 12; 26:1, 15, 24, 25;
27:2, 4, 21; 49:13; 53:23;
54:20; 55:7; 60:21; 83:17;
19; 85:5; 88:9, 15; 89:9
Dose 2:2, 6; 4:9, 10, 17,
25; 5:14, 19; 6:1, 2, 4, 8, 9,
10, 12, 19, 20; 7:3; 17:18,
18; 25:20, 21; 30:12, 19,
23; 33:10; 34:17, 17; 36:6;
50:22, 25; 51:10; 56:3;
57:17; 58:3; 59:16, 23;
60:7, 12; 62:8, 19, 20, 25;
65:4, 23; 66:3, 3, 7; 70:23,
24; 71:1, 5, 6, 8, 21; 72:22,
23; 74:9; 75:14, 16, 20, 24;
77:7; 84:16; 85:4, 14, 15;
89:17; 90:17
doses 6:23; 7:9; 35:5;
58:16
dots 42:20
doubt 63:17

Doug 3:13; 7:10, 13;
80:21; 89:19
down 11:18; 18:21;
32:24; 42:14, 25; 51:22;
59:20, 24; 63:11
Dr 7:15, 16; 10:8; 13:9, 9;
15:22; 23:2, 2; 24:3; 32:14;
40:4; 56:12, 13; 59:13;
61:22; 63:14; 71:16;
76:21; 80:19, 21; 81:9;
82:15; 85:10; 86:2; 87:23
dramatically 64:22
drawing 79:18; 90:19
drawn 79:2
drill 73:25
drilling 75:1, 14
drive 33:18
drops 36:9
dry 45:11, 18
dryer 23:20
drywall 59:12, 14; 60:1,
7, 14; 61:13, 14; 63:5, 10;
64:13
due 57:9; 65:1; 78:16
duration 5:21, 22; 6:11,
17; 19:10; 26:6, 12; 27:13;
31:19; 37:3, 8; 47:9; 58:11;
63:6, 7; 70:12
duration/frequency-
length 37:17
during 12:9, 19; 14:2, 5,
13; 48:24; 68:20; 69:2;
73:2
dust 12:2, 6; 40:10; 43:12
duty 27:20, 25
Dyson 3:6; 56:13, 14;
81:21; 88:7

E

earlier 34:14
earliest 22:1
early 58:23; 61:7, 12;
77:5
education 32:7
effect 29:22; 72:8
effective 70:22; 71:6;
75:20
effectively 50:19; 76:6
eight 9:22
eight-hour 26:22; 28:23;
46:6; 49:13; 69:10, 21, 23
either 40:2; 53:21; 66:24;
70:11
elaborate 77:1
elbow 41:17, 18
elbows 36:12
element 63:10; 65:3
elements 34:2
elephant-sized 39:20
else 49:1; 83:23; 85:16
emanating 25:14
embarrassingly 50:16

Emeritus 76:23
empirical 7:6
employed 66:25
employees 89:18
employer 9:16, 18;
37:14; 67:1, 2, 7, 10
employment 5:22; 6:18;
66:22; 67:3
encapsulated 16:17;
17:4; 18:24; 24:4, 19
enclosure 15:9
encounter 66:1
end 50:20; 60:1; 87:25;
88:3; 90:24; 91:5
engagement 66:22
engine 22:21; 89:24
Engineer 3:3
engineering 3:8, 10
enjoyed 2:20
enough 41:10, 11; 77:20
enter 70:5
entered 68:9, 14; 69:6, 19
entering 25:13
enters 39:7
entertain 76:19
entire 63:6
entirely 15:18; 81:8
entries 73:6
entry 67:24
environment 18:4, 25;
19:1; 22:9; 24:18; 25:6, 7;
37:15; 42:13
Environment's 18:16
environmental 3:9; 4:6;
15:5; 21:8, 10; 27:4; 86:25
environments 19:3
EPA 5:10, 13, 17; 55:1
EPI 27:3
epidemiologic 4:15, 25;
77:4; 85:11
epidemiological 55:24;
58:19; 61:7; 62:7
epidemiologist 77:17
epidemiology 58:13
episode 14:2, 5
equal 6:12; 42:2
equals 6:10; 66:17
equation 58:8; 88:3
Equations 45:16
equipment 10:1; 37:17
equivalent 13:13; 29:5,
13, 14; 30:11; 66:15; 69:12
error 51:8
especially 90:12
essence 50:18
essential 79:9
essentially 5:12; 7:4;
11:25; 13:13; 40:25;
41:11; 45:25; 47:22;
48:16; 49:13, 18; 51:15;
52:2, 8; 53:24; 58:25
establishment 66:9
establishments 79:11

estimate 18:8; 34:8, 14;
46:25; 63:19; 68:24;
69:20; 88:13
estimated 6:1; 33:9;
35:5; 62:10
estimates 5:21; 6:8; 65:4;
70:11, 12; 71:13, 23; 79:8;
81:6
estimating 36:6; 68:20
estimation 5:1; 58:18
Estimations 36:18, 20;
37:20; 43:19; 52:17, 21,
25; 55:15
et 37:3; 38:5; 46:19
evaluate 16:13; 32:2
evaluated 25:16; 26:3;
44:19
evaluating 19:23; 31:10;
85:7
evaluation 8:5; 18:17;
40:24; 41:1
even 16:10; 19:15; 22:22;
23:14; 49:21, 23; 53:5;
57:7; 79:10
event 34:8, 16, 17; 36:23;
37:18; 38:6; 49:14; 66:13;
67:4, 6, 15, 22; 68:25;
70:8, 21, 22, 23; 71:4;
73:5, 15, 15; 74:10, 13, 14;
75:25; 76:2, 6, 8; 84:24;
85:5; 91:2
events 34:9; 35:6; 38:10;
47:5, 5, 10; 50:18, 19, 24;
66:10, 12
everyone 2:9; 31:14
exact 47:16
exactly 9:18
examination 4:17, 19
example 16:20; 17:4, 16;
36:6; 38:3; 39:13; 43:13;
45:16; 46:11; 51:10, 18;
52:13; 54:19; 58:22;
62:11; 68:4; 86:8; 88:18
except 12:6; 44:10;
55:11; 75:7
Excuse 80:18
exhaust 19:14
exist 24:16; 87:15
existing 44:10
expect 15:4
experience 5:23; 17:21;
21:21; 23:18; 26:11; 32:7;
34:19; 38:11; 40:11;
65:25; 66:19; 68:25; 69:1;
76:16
expert 9:11
experts 82:9, 11, 17, 17
expires 92:19
explain 23:17; 50:21;
59:19
explore 32:19
Expo 2:4
exposed 33:1; 34:11, 15;
45:23; 47:14; 48:24; 74:5;
88:21

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et al

TRANS. CIV. DIV. AMERICAN
June 27, 2002

Exposure 2:2, 5; 4:11,
20; 5:1, 8, 13, 17, 20, 20;
6:11, 11; 7:24; 8:8, 9, 11;
12:11; 13:24; 14:25; 16:8,
17; 17:1, 2, 14, 15; 18:2, 8,
10, 14, 18; 19:1; 21:4, 7,
13; 23:1, 7, 9, 12, 23;
24:15; 28:15; 29:15, 19;
24; 30:8, 16, 17, 22; 31:3;
33:6, 7; 34:3, 7, 7, 8, 8, 9,
14, 16, 17; 35:6, 7, 8; 36:5,
22, 23; 37:18, 19, 21; 38:1,
2, 6, 8, 14; 17, 20; 39:14,
23; 40:21, 24; 41:4, 8, 10;
42:3, 11; 43:2, 18; 44:17;
45:25; 46:18, 23; 47:5, 5,
10, 25; 48:13; 49:5, 8, 24;
50:18, 24; 51:22; 52:1, 3,
5, 6, 7, 10, 12; 53:9, 10;
54:20, 23; 56:3, 4, 22;
57:9, 17, 20, 22; 58:8, 10,
18; 59:2, 9, 11, 13, 16, 22;
60:1, 4, 7, 10, 10, 12, 25;
61:12, 24; 62:1, 17, 23;
63:11; 64:4, 17, 18, 19, 24,
25; 65:4, 15, 19; 66:5, 9,
12; 67:4, 6, 15, 18, 22;
68:25; 71:4, 23; 72:25;
73:1, 4, 12, 15; 74:13, 13;
77:3, 9, 13, 14, 19, 19;
78:1, 7, 12, 14, 22, 24;
80:24; 81:1, 23, 24; 83:3;
84:2; 86:6, 11; 87:12;
89:12, 17
exposure's 61:14
exposures 5:2; 8:15, 18;
9:5, 24; 10:7, 9, 18; 11:22;
14:1, 3, 10; 16:9, 13, 21,
22; 17:8; 21:20; 26:4; 31:2;
32:1, 3; 34:14; 39:5, 9, 21,
21, 22; 40:1; 41:2; 44:16;
45:10, 17; 46:22; 54:3;
58:11; 61:4, 4, 6, 7; 73:2;
77:11; 81:7; 85:21; 86:7, 7;
87:7, 10; 89:24
extended 48:17
extension 56:21
extent 44:9; 82:17
extraordinarily 77:15
extraordinary 25:24
extrapolation 83:25;
84:5
extrapolations 5:24;
40:22

F

fabricated 24:21
fabrication 21:24
faced 79:25
facilities 77:10
facility 89:4
fact 40:20; 41:14; 43:11;
45:21; 88:12
factor 33:7; 34:9; 41:13,
16, 24; 42:9, 9; 43:18;
46:19; 47:18, 19; 48:15;

49:3; 50:9, 14, 23; 62:9;
83:9
factors 5:8, 13; 34:13;
37:20; 38:7, 8; 41:3, 4, 8,
10; 42:2, 3; 46:23; 65:9,
10, 12; 79:21
fairly 59:18; 62:17; 63:20
fans 19:14
far 83:18
fascinated 87:9
fashion 10:3; 59:19
federal 16:4
Feel 90:25
feeling 47:8
feet 11:2; 22:18; 41:19;
42:14; 43:1, 2, 4
fellow 8:10
felt 56:15
felted 22:17
few 47:8; 62:3, 7; 63:5;
84:12; 90:1
fiber 6:21, 22; 13:23, 23;
15:2; 17:18; 20:19; 25:21;
29:16, 24; 30:16, 17; 40:2,
12, 18; 46:8; 48:17; 51:24;
55:22; 56:2; 58:20; 59:23,
24; 60:5; 62:21; 63:15, 18,
22; 64:5, 12; 65:8; 66:18;
68:10, 13; 69:14; 71:7, 17,
20; 75:17, 24; 79:19
fiberglass 31:5; 45:2
fibers 12:20; 13:4, 19;
20:6, 16, 21, 21, 22; 23:7;
24:18; 25:8, 11, 13, 14;
27:1, 6, 8; 28:17, 24;
30:13; 31:6; 43:15; 46:9;
48:2, 5, 6; 49:16; 54:3, 4;
60:2; 62:23; 63:22; 64:12;
87:12
fibrosis 43:24; 78:10, 15
fictitiously 51:19
field 3:5; 26:25; 80:5;
82:10; 86:12
figure 39:6; 81:17
figures 81:13, 16
filing 87:3; 88:6
fill 40:19, 22; 43:15; 77:11
filtered 11:3
filters 11:13; 13:14; 43:25
final 50:15; 84:5
finally 19:13; 35:5; 59:10;
65:11; 73:10
find 20:18; 33:17; 47:1;
59:19
findings 20:24
fingers 36:12
fire 17:10; 73:22; 90:13
fireman 87:5
fireproofing 44:21; 45:4;
49:10
firing 90:13
firm 27:3
first 7:11; 9:10; 41:1, 2;
51:1; 58:7; 66:22; 71:2;
75:18; 78:17

fit 58:13; 75:11; 76:11
five 2:6; 69:16
flatten 11:18
Fleet 88:9
floor 68:5; 69:4
flooring 67:19
focus 22:11; 77:16; 81:20
focused 19:4
focusing 24:14
folks 12:3
follow 6:25
fool 79:16
foregoing 92:9, 12
foreman 44:15
form 15:9; 67:6; 71:5
formalized 85:24
formally 89:2
formed 9:15
former 3:16; 7:15
forms 35:25
formula 49:19
forth 42:18; 61:13, 18
Forum 2:6; 6:25
forward 91:2
found 21:5; 25:7; 32:4;
37:12; 38:10; 39:4; 50:17
Four 12:18; 18:22; 27:21,
22, 24; 47:10; 61:4; 83:14;
85:25
four-step 5:7
fourth 61:2
Fowler 3:13, 14; 7:11, 13;
15:22; 24:3; 40:4; 80:19,
21; 89:19
Fowler's 23:2
foyer 89:9
fraction 52:1
frames 61:18
Frances 92:18
frankly 84:9
FRED 2:22; 3:1; 7:13;
15:22, 25; 26:16; 32:13;
56:12; 65:18; 76:21;
80:14, 18; 84:8; 86:15, 23;
90:16
free 90:25
frequencies 26:12
frequency 19:9; 27:13;
31:19; 37:8; 52:19; 69:8,
16
frequently 6:21; 25:19;
44:25; 87:2
friable 16:16; 17:3, 22;
18:23; 21:22; 22:14;
24:12, 17; 39:25; 40:5, 11,
16
front 87:25
full 9:22; 53:14
FULTON 92:5
fundamental 4:11; 5:2;
85:10
further 24:13; 42:8;
60:15; 61:20; 64:2

furthermore 88:18
future 86:7

G

G 23:10
game 82:4
gaps 35:1; 40:19, 23
gas 42:7, 12
gasket 8:14; 9:3; 10:15,
18; 11:1; 14:11, 18, 23;
17:5, 25; 21:24; 24:1, 2,
11, 14, 19; 25:5, 22; 26:14;
27:14; 28:9; 30:17, 19;
31:3
gasket-handling 27:8
gasketing 9:16; 13:20;
14:3, 21; 15:8
gaskets 8:18, 19, 20, 21;
9:4; 10:1; 24:21, 23; 26:7;
27:15, 15, 23; 28:10, 13;
30:10, 12; 44:21; 51:11
gather 84:13
gathered 34:25
gave 9:11; 59:13; 88:10
geared 34:1
general 36:25; 43:9;
48:1; 68:10
generalized 39:16
generally 4:21; 25:22;
26:18; 27:17; 40:1; 42:1;
85:15
generate 7:6; 45:14
generated 22:7
generation 73:7
generator 45:14
geometric 49:11, 12, 19,
20
GEORGIA 92:4
gets 42:1; 51:6
given 8:15; 78:9, 20;
79:15
gives 61:19
giving 81:13
gleaned 65:21
goal 14:24
goes 29:10; 38:4; 63:11,
12; 83:9; 87:5
good 15:25; 23:4; 26:5,
18; 28:19; 31:10; 32:1, 15;
53:12, 22; 54:21; 55:10,
22; 56:14, 16; 60:13;
77:20; 78:24
gram 54:1
graphically 49:15
grave 80:23
great 7:19; 16:2; 49:6;
57:11; 83:1
greater 12:14, 17; 14:11;
40:1, 3; 79:10
greatest 72:3, 13; 73:2
green 47:13; 54:8
Group 3:7; 11:21; 16:6;

36:2, 3
growing 17:9
Guard 4:8; 16:23; 21:23;
26:5; 89:2, 8, 16, 18
guesses 81:5, 6
Guidelines 5:10, 17, 18;
40:21; 78:13
guy 11:24; 13:18

H

half 28:23; 43:2; 50:4;
55:5, 7, 9
hand 24:24; 26:15; 35:19;
42:18, 21; 43:6; 48:3;
64:16
handle 11:17; 26:5, 11
handling 8:18; 27:14;
28:13; 40:14
handout 2:12
hands 36:13; 49:1
hands-on 37:2; 44:13,
19, 22
happen 37:6, 7, 24
happened 46:13
happens 72:17
hard 5:23; 31:6; 32:24
Harries 23:10; 83:22
hazard 5:7
health 3:9; 21:15; 86:25
heard 58:11; 78:23; 79:7
hearing 92:10
heated 10:4
height 73:4
help 34:14; 40:19; 81:19;
82:18
helpful 10:23; 76:1
HEPA 11:3
hereby 92:9
hexafluoride 42:11
high 6:5; 13:4; 46:22;
48:15; 50:10; 54:14;
77:19; 78:6
higher 12:17; 14:14, 25;
15:2; 17:14; 23:14, 16;
26:19, 22; 28:20; 46:15
highest 48:4, 18; 72:12
himself 44:23
historic 73:19; 85:14
historical 21:3; 23:3, 5;
25:24; 31:21; 38:15;
65:19; 83:5
historically 21:20; 84:10
history 8:11; 27:18;
32:22; 34:7, 20, 24; 35:8;
36:22; 43:20; 44:4; 45:7;
46:11; 59:3; 66:21; 71:14;
72:24; 73:15; 85:2
Hodgson 63:20
hole 69:4; 75:15
holes 73:25; 75:2
Home 24:7; 60:3
homes 60:3; 63:5; 67:13,

TRANSCRIPT FROM AUDIO TAPES
June 27, 2002AMERICAN INDIAN LITIGATING CONFERENCE
& EXPO 2002, et al

sonor 7:19
 onored 32:17
 ape 2:20; 81:18
 pefully 64:10
 pkins 76:23
 at 79:18
 our 11:3
 ursor 9:23; 27:21, 22, 24,
 ; 28:3, 10, 22; 60:3; 69:9
 use 61:19
 ndred 41:18, 19; 57:1;
 :19
 ng 88:12
 giene 2:3; 3:11, 15, 19,
 5:3; 8:2; 14:18; 18:13;
 25
 gienist 2:24; 3:2, 7,
 21; 4:5, 8; 16:3; 25:24;
 4; 38:21; 46:14; 55:19;
 18, 20; 87:16; 89:3
 gienists 6:6; 7:2;
 12; 18:3; 19:19; 31:13;
 5; 74:6; 86:10

I

5:1
 a 37:8, 18; 46:1; 51:4;
 6; 65:13
 itical 14:7
 itify 17:19
 ring 54:8
 5:12
 :17
 is 88:10; 90:2
 trate 54:15
 tration 46:21
 rative 88:14
 ediate 41:15
 rtant 20:8; 25:4, 18;
 ; 36:18; 52:9; 53:13,
 5:21; 76:24; 82:20
 rtantly 19:7
 ssible 31:2; 84:6
 75:2
 ent 74:12, 13
 de 35:3
 des 5:7; 18:22
 jing 4:2; 16:25;
 6:16
 ive 46:12, 20;
 82:16
 ses 50:19
 f 77:16; 87:19, 20
 te 54:17
 ted 42:19; 48:12;
 tes 54:17
 ive 46:4; 52:15
 ual 6:16; 17:20,
 ; 19:3; 27:11; 29:7;
 i2:10; 54:6, 6;

57:22, 24; 58:3, 5, 23;
 59:2; 60:25; 61:10; 62:12;
 65:14; 67:14; 68:21;
 70:21; 71:3, 19; 73:7, 18,
 21, 24; 74:3; 76:7; 77:20;
 78:2, 7; 80:4; 81:2; 85:3;
 90:21
 individual's 61:15;
 64:23; 71:7; 72:24
 individuals 32:21; 79:5,
 11; 80:24
 indoor 39:13; 42:22
 indoors 41:23; 42:13
 Industrial 2:3, 24; 3:2, 7,
 11, 14, 15, 19, 21, 25; 4:4;
 5:3; 6:5; 7:1; 8:2; 14:18;
 16:3, 12; 18:2, 13; 19:19;
 25:23; 26:4; 31:13; 32:5;
 38:20; 40:25; 46:14;
 55:18; 74:6; 85:18, 20;
 86:9; 87:16; 89:3
 industry 9:14; 57:10
 Infants 4:3
 inference 39:2
 influence 72:4, 13
 information 4:25; 5:14,
 22; 7:5, 5; 10:11; 27:18;
 37:9; 42:5; 44:18; 54:1;
 63:15; 64:1; 65:21; 67:9,
 11; 68:2, 4, 8, 14, 23; 69:6,
 15; 70:1, 25; 71:10, 22;
 72:18; 73:16; 80:25;
 83:13; 84:2, 13, 23; 85:13;
 86:18; 89:19, 21; 90:2, 10,
 14, 15, 18; 91:3
 initial 60:25
 initially 61:22
 injury 4:18
 input 49:18, 20; 50:12;
 72:8, 16
 inputs 72:1, 3; 73:8;
 75:22, 22
 inquiries 87:2
 inserted 30:7
 installation 60:14
 installed 44:24
 installing 28:10; 30:9, 11
 instance 79:18; 87:11
 instances 44:10
 instead 48:16; 52:18
 instinct 85:20
 Institute 3:17; 88:10;
 90:2, 3
 insulating 17:23; 22:11
 insulation 9:14; 10:2, 4,
 5, 11; 17:3; 21:22; 22:14,
 18; 24:12; 27:12, 20; 28:3,
 13, 16; 29:12, 23; 30:2, 15,
 16, 22; 44:21; 47:15;
 48:22; 51:12; 67:20; 89:14
 insulators 45:1; 52:15;
 53:1
 integrity 79:14
 intended 4:24
 intensity 37:7; 58:10;
 62:1, 15, 23, 25; 63:1, 4, 7;

64:4; 65:2
 interact 35:21
 interest 70:4; 84:24
 interesting 20:1; 26:21;
 55:20; 63:14; 64:11;
 82:25; 83:12
 interferences 25:11
 international 83:15
 interpolations 5:24
 interpret 47:3
 interpretations 5:24
 interpreting 43:17
 interstitial 43:24
 interval 50:4, 11; 53:18
 interview 35:9, 17; 36:1;
 74:16
 interviewing 35:15
 interviews 34:25; 65:22
 into 8:12; 11:4, 14, 16;
 18:21; 23:20; 24:18;
 28:14; 29:10; 34:5; 37:13,
 13; 38:3, 7; 39:16; 40:7;
 41:3, 3, 4, 6, 13; 42:2;
 43:20; 45:17, 21; 46:3;
 47:7; 49:18; 50:3, 19; 51:7;
 52:18; 54:25; 55:14;
 71:22; 75:2; 77:18; 82:3;
 84:3; 85:12
 introduce 2:9
 intuitively 74:6
 inventoried 74:23
 involved 16:4, 24; 24:1;
 42:10; 46:13; 56:8; 64:6;
 68:6; 77:5, 8; 79:12; 82:8
 involves 65:19
 involving 39:3
 Island 89:21
 issue 55:23
 issues 53:16; 89:7
 item 73:6
 items 71:3

J

J 11:20
 Jack 7:16
 James 88:9
 Jim 3:20; 32:15; 54:14;
 82:13; 85:18; 86:20
 job 17:24; 27:19; 34:18,
 20; 37:15; 69:22; 77:13;
 90:20
 John 4:4; 15:23, 25; 25:4;
 32:13; 89:1
 Johns 76:23
 join 2:23
 joint 45:4
 joints 22:19
 Jones 90:2
 Journal 3:18
 judge 7:5
 judged 77:23
 judges 79:3

judgment 5:25; 32:6;
 38:6, 9, 9; 39:24
 June 92:15
 juries 59:20; 79:3
 justice 78:4

K

Kazakhstan 4:3
 keep 23:2; 37:22
 Kent 43:25
 kind 7:24; 18:10; 22:24;
 35:18; 36:2, 3; 37:22; 38:1,
 3, 5; 52:10; 53:24; 81:3;
 88:5; 90:13
 knew 26:3; 74:24; 75:2, 3,
 4, 5
 known 5:9; 6:21; 34:10;
 37:10; 68:9; 77:13; 90:14

L

lab 11:20
 labor 48:20
 laboratories 54:22
 laboratory 11:21
 ladders 83:16
 laid 5:4
 large 61:19; 88:14
 larger 44:6; 64:8
 largest 60:6; 64:22
 Larry 2:23, 24; 22:2;
 32:15
 last 66:23
 lasted 44:16
 late 22:4
 latencies 61:11
 latency 60:17; 62:2, 4, 5;
 64:4; 65:2, 8
 later 34:22
 lawyer 10:20, 22; 11:22;
 88:1
 lawyers 8:23; 9:7
 Lead 4:2
 leader 4:7
 leading 35:25
 learned 35:24
 least 7:18; 60:18; 64:10;
 65:3; 72:18; 74:19; 82:3;
 87:14
 lecturer 3:15
 Lee 11:20
 legal 8:1; 57:8; 77:25;
 78:4; 88:5
 length 6:18; 37:8
 less 12:16; 23:20; 28:12;
 38:4; 40:13, 17; 43:9;
 48:12
 lessons 35:23
 letter 11:23
 level 30:3; 85:2
 levels 17:8, 14; 23:6;

25:9; 30:7; 89:12, 16, 17
 liability 60:21
 library 70:10
 Licensed 3:2
 life 55:5, 7, 9; 58:24
 lifetime 35:7; 52:1, 2, 5,
 20; 59:1; 65:23; 71:21
 light 8:11
 likely 6:23; 7:9; 24:18;
 78:5
 likewise 86:12
 limit 61:24
 limitation 39:4
 limitations 33:13; 82:20
 limited 44:19; 84:4
 line 54:7; 66:12; 67:5;
 71:3; 73:6; 79:24
 linear 22:18; 42:1
 lines 50:8; 54:14
 link 70:15; 75:13
 linkable 70:14
 links 67:23; 70:10
 liquid 10:4
 listened 80:7
 listening 77:24
 literally 80:8; 86:1
 literature 18:11; 19:2, 12;
 20:10, 11; 25:17; 26:9, 14;
 28:21; 37:20; 38:9, 25;
 52:23, 25; 61:7; 67:23;
 83:15; 85:25; 86:16, 17,
 19, 22
 liters 12:25
 litigation 7:23; 46:14;
 60:18, 22; 85:9
 little 22:7; 26:22; 28:12;
 18; 33:13; 40:10; 48:12;
 49:24; 56:17, 21
 little-bitty 11:2, 6
 Liukonen 22:3
 live 2:2
 local 19:14
 located 67:10, 13
 location 37:14; 67:7, 8;
 83:20
 logic 5:25
 long 10:8; 13:25; 25:18;
 31:16; 36:13; 56:15;
 69:22; 74:19
 longer 9:20; 74:20
 look 6:7; 19:7; 20:2;
 23:10; 33:8; 42:8; 47:25;
 54:21; 55:5; 58:15; 66:7;
 70:22; 72:1; 74:12; 84:22;
 91:2
 looked 25:25; 26:2, 3;
 27:13; 31:20; 60:12
 looking 6:3; 18:24; 19:2,
 25; 21:11, 14; 22:17; 25:5,
 9; 26:8; 54:24; 65:21;
 66:19, 20; 68:25; 70:4, 20;
 73:1, 3; 89:11
 looks 29:15; 49:15, 25;
 61:14; 72:23; 73:7, 11

lot 20:2; 21:21; 22:23;
24:11; 28:14; 29:9; 49:24;
51:5; 78:15, 16; 89:8;
90:15
lots 37:5
love 87:21
low 6:5; 25:9; 28:17;
43:23; 50:10; 54:15;
77:19, 19
low-level 17:14
lower 12:22; 28:18; 63:1
lowest 11:8; 58:16
lung 43:22; 57:19; 65:7;
78:11, 16; 87:18
lungs 54:4

M

machine 33:24
machinery 22:10, 16;
89:25
machinist 90:20
mag 14:18
magnitude 38:2, 5; 82:15
Magnitudes 17:8
main 22:11
maintenance 32:23; 56:8
makes 84:4
making 9:25; 40:22;
52:16; 83:24
man's 8:25
manageable 11:14
manager 3:16
Mangold 25:23; 27:4
manifestation 78:22
manner 86:12
manufactured 8:13;
37:16
manufacturer 8:14;
14:20; 15:7; 51:21; 68:7, 8;
70:6; 73:13
manufacturer's 70:5
manufacturers 10:5;
70:3
many 7:17; 9:21; 16:14;
18:19; 24:4; 36:9, 9; 37:6;
38:10; 39:10; 50:17, 19,
23; 52:18; 55:8, 24; 71:3;
77:5; 81:16; 82:14; 83:21,
25; 84:1
Mare 89:20
market 24:4, 10
marvelous 82:12
mass 39:6, 15
massive 83:25
masters 3:8
mastic 24:8
mate 90:20
material 7:20; 12:7, 10;
13:20; 14:3, 21; 15:9, 16;
17:5; 21:12; 22:20, 25;
23:20; 24:6, 8, 19; 36:7;
40:5, 14; 44:22; 68:7, 10;

70:2, 5, 13; 74:24; 75:3, 4,
11
materials 15:8; 17:23,
24; 22:12, 14; 24:2, 5, 15;
25:5; 39:3; 40:8, 16; 45:2
mathematics 60:19; 74:9
matrix 77:14
matter 86:3
maximum 53:25
may 6:23, 24; 8:1; 12:2;
20:20; 21:6; 28:17; 33:2;
41:24
maybe 37:10; 81:17, 18
McDermott 26:21
mean 15:17; 23:4; 47:3;
49:19; 50:22; 51:5, 6, 8;
70:23; 71:17; 83:4; 84:14
meaning 8:1, 2
meaningful 8:24
means 49:12; 57:2; 84:19
measure 38:12; 75:9
measurement 81:17;
90:4
measurements 38:23;
39:2; 51:7; 81:4; 88:16;
90:5
measuring 5:2; 30:6
meat 34:5
mechanic 44:14
mechanism 76:5
median 71:6
medical 89:5, 6
medium 77:19
medium-sized 39:21
memory 5:23
mention 63:23
mentioned 63:14; 86:2
merchant 90:6
merit 81:13
mesothelioma 8:6, 7, 8;
55:24; 56:23; 57:1, 18, 25;
58:17; 60:11, 24; 61:8, 12,
16, 25; 62:9; 63:9, 16;
64:3, 24; 65:6, 13; 78:12
method 13:12, 13; 14:9;
20:14, 15; 33:5, 14, 14;
46:1; 51:17; 53:19
methodologies 32:19;
79:15; 82:2, 6
methodology 78:25;
82:1, 20, 21
methods 19:17, 20; 21:9;
80:6; 81:12
meticulous 31:17
micrometers 12:15
micronite 43:25
microscopy 12:13
mid 53:25
might 4:13; 10:23; 11:24;
13:8; 20:3; 38:9; 50:1;
56:16; 57:24; 59:11;
68:21, 22; 69:15, 16, 17,
17; 82:6; 84:23
Mike 7:16; 86:24, 24

mil 6:21
miles 21:22
military 16:25; 28:4, 5;
35:12
MILLER 86:24, 24
milliliter 15:3
millimeter 13:14
million 57:5
millions 83:25; 84:1
mind 63:17
minimum 53:24; 60:10;
62:4; 75:16
minus 62:10; 75:23
minute 80:18, 19
minutes 12:24; 25:23;
37:5
missing 7:6; 35:2; 77:11,
11
mix 59:7
mixed 61:5; 64:17
mixing 45:4, 11, 19
mixture 22:23
model 39:5, 14; 58:13;
60:16; 61:21; 63:10, 13;
64:2, 7, 21
modeling 39:4, 9, 11
models 39:9; 82:13; 84:3;
87:24
modification 42:6
modify 39:11
moment 17:19
money 14:23
monitor 18:4; 31:14
monitoring 21:8, 19;
42:18; 85:19; 89:6
Monte 33:5; 45:7, 8, 13;
46:1; 49:19; 51:2, 16; 52:3;
53:24; 56:1; 59:14; 71:9,
15; 75:21; 81:12; 83:1
month 47:10
months 63:5
more 5:4; 22:7; 23:19;
24:17; 28:14; 29:9; 34:19,
21; 36:25; 38:16, 19; 55:3,
21, 21; 61:8; 65:24; 72:16;
73:20; 78:5; 81:20; 84:23;
86:10; 88:2, 4
Morgan 60:20
morning 2:21; 16:1, 21;
32:15, 19, 20; 41:8; 56:14;
58:12; 76:15; 78:20
Mort 81:22; 82:5; 83:1
MORTON 76:19, 22, 22
most 8:17; 18:8; 19:25;
22:1; 49:8; 64:12; 65:9;
66:23; 72:5, 8; 73:1; 83:12,
14; 86:22
mostly 44:5
move 39:13
moved 42:17
movement 11:10; 19:6
moving 32:24
much 7:13; 12:23; 15:20;
23:16; 24:17; 28:7; 40:14;

47:23; 56:10; 65:16;
80:10; 83:10; 84:9; 86:13;
89:23
multiply 57:6
must 21:16; 31:16; 65:12;
82:9

N

name 23:2, 2; 67:6
namely 66:9, 21
narrower 42:4
National 5:6; 40:20
nature 35:1; 36:14; 40:9;
67:11
Naval 22:4; 89:4; 20, 21
Navy 16:23; 17:21; 21:23;
22:2; 26:19; 30:5; 58:24;
59:17, 22; 61:13; 62:16;
63:12; 64:16, 24; 86:24;
87:12, 14, 17; 88:20; 89:8,
9
near 68:16; 84:5
nearly 22:20; 31:2
necessarily 20:15; 23:17
necessary 46:20; 58:2,
14; 63:2; 85:12
need 5:19; 19:23; 24:13;
33:16, 21; 38:15; 51:14;
62:5; 69:11
needed 15:4
negative 11:7
neoprene 9:15
Nevertheless 54:7; 74:2
new 44:7, 8, 11
next 32:13; 47:20; 56:13;
63:13
Nicholson 61:22
nine 9:22; 16:6; 44:2
NIOSH 4:8; 18:15; 19:19;
21:1
no 9:2; 14:25; 15:1; 24:21;
27:1; 34:1; 54:17; 87:8
non-power 44:25
nonasbestos 15:18;
20:23
nonfriable 40:5, 15
nonlitigation 85:9
Norfolk 86:25
normal 8:19
normalize 29:1
Note 12:23; 63:4
noted 15:6
notice 62:14
notions 33:18
nuance 62:13
number 3:18; 4:1; 5:5;
10:17; 16:4, 8; 23:6; 24:1;
26:16; 27:16; 28:16, 17,
19, 20; 29:1, 5, 13; 37:5;
45:14; 47:17; 51:7; 54:12;
62:20; 66:14, 15; 69:8, 12,
13; 70:2; 83:2, 11, 19;
84:10, 13; 87:13; 88:8, 21,

22
numbers 23:13; 25:25;
26:19, 22; 62:15; 63:3;
64:8; 83:24; 87:10; 88:11,
23; 90:8
numerical 85:14

O

oath 80:22
objective 57:21; 74:8
objectives 32:18
objectivity 38:12
obvious 24:12, 17
Obviously 22:9; 41:9;
57:25; 88:7
occasion 80:23
occupation 37:14; 52:24
occupational 3:4; 18:14,
16; 21:13, 14; 66:19; 89:6
occur 50:7; 76:4, 5
occurred 60:24; 73:3;
74:1; 75:7
occurrence 28:25
occurring 42:15; 57:3
occurs 87:23
Off 27:25; 28:7; 34:24;
40:10; 42:24
offered 9:11
officer 3:12
often 13:25; 16:17; 17:13;
27:12; 28:5; 37:6; 45:2;
90:17
oftentimes 38:23; 42:5;
65:9
oil 88:17
old 8:4; 37:7
oldest 72:25
once 33:21; 58:6; 69:17;
74:1
One 2:7; 4:24; 7:14; 8:13;
11:6; 14:13; 16:9; 18:12;
19:21, 24; 20:19; 21:16;
22:2, 2; 25:1; 27:21, 24,
25; 30:24, 25; 31:23; 32:1,
4, 10; 33:23; 35:2; 36:1, 1;
38:20; 47:9; 51:1, 10, 15,
16, 18; 53:8, 14, 15; 55:11,
12, 16, 20, 25; 56:25;
62:22; 64:15; 65:19;
66:17, 23; 69:17; 70:9;
73:20, 20; 79:25; 80:1, 1,
2, 3, 18; 81:13, 17; 82:10;
83:19; 84:17, 21; 90:4, 4
ones 77:5
only 20:10; 25:12; 28:22;
31:4; 53:12; 58:6; 62:22;
64:4; 69:17; 72:6; 79:1;
80:4, 25; 85:8, 25; 90:3
operated 11:8
operation 8:24; 9:3
operations 10:15, 18
opine 85:7
opinion 65:11

TRANSCRIPT FROM DEPOSITION
June 27, 2002AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et al

opposed 13:19; 65:2;
6:17; 89:22
opposite 81:23
order 7:11; 11:16; 12:10;
5:20; 38:2, 5; 55:13
orders 82:14
ordinary 8:18
organic 36:7
organizations 16:5
organize 37:12
organized 37:23
SHA 14:4; 19:19; 20:14;
61:23
hers 22:3; 34:4; 61:17
rseives 33:21; 82:7
it 5:4; 11:18; 19:22;
25; 21:1, 6; 23:8; 24:3;
26:9; 29:22; 30:15, 22;
6; 48:4; 49:23; 57:6;
24; 64:24; 70:17;
22; 82:1, 4; 83:10;
10; 85:10; 87:23;
24; 89:15; 91:1
tdoors 39:14; 41:24
tput 71:15, 25; 72:6, 8;
6, 11, 16
tputs 72:1, 19
tside 2:17
er 5:5; 8:21; 9:8, 19;
21; 21:25; 22:17; 25:2;
21; 31:5; 32:22; 37:6;
20; 59:8, 23; 62:24;
1, 6, 7; 82:23
tall 37:3; 38:10, 11;
89:17
rinterpret 39:19
tloaded 12:25
rsell 80:5
rstate 53:17
view 4:9
whelm 11:9
3:5; 16:6; 21:21;
23:18; 26:10, 11

P

12; 23:10
ing 24:5
9:15
48:8; 75:19
s 92:12
49:10
ists 80:15; 81:12
60:20
s 4:1; 18:19; 26:21;
13:5, 14
igm 5:7
eters 17:19
14; 5:3; 16:7;
25:16; 44:11; 48:4;
10; 54:13; 74:23
pate 76:15
pation 76:13

particular 7:24; 17:11;
18:11; 20:14; 21:12;
25:19; 33:4; 39:8; 58:22;
60:25; 63:10; 64:7, 21;
67:1, 7; 68:7; 70:6, 16;
71:17; 72:3, 8, 10, 11;
73:12, 21; 83:20
particularly 32:21;
33:11; 35:17; 59:25
partner 49:3
parts 7:2; 17:11; 52:8;
71:22
passed 78:18
Past 3:10; 4:18; 5:5; 14:4;
16:6; 31:1
patent 4:13
pathologists 54:1
pathway 4:12; 54:25
Pathways 4:2
paucity 90:10
paying 34:21
PCIH 2:14
PCM 12:16, 19; 20:3, 6;
17, 19, 24; 25:10
peer 3:17
peers 7:17
PELs 14:4
penny 87:20
people 2:6; 7:17; 9:7;
21:6; 22:1; 24:14; 26:16;
32:23; 34:10; 48:20; 55:8;
61:5; 62:4; 66:1; 76:3;
83:24; 88:21; 89:5; 90:18
per 6:21; 11:3; 12:13, 21;
13:4, 20; 15:2; 17:11;
20:19; 22:21; 23:7; 27:21;
22; 28:3, 17, 24; 29:1, 13;
30:13; 39:7, 15; 40:2, 12;
18; 46:8, 9; 48:2, 5, 6, 17;
49:17; 50:18; 51:24; 54:1;
56:25; 58:20; 59:23, 24;
60:3, 3, 5; 62:21, 23;
66:17; 69:9, 16; 87:12
percent 20:18, 22, 23;
24:9; 36:10; 37:3; 41:6, 16;
22, 25; 42:15; 43:3, 5, 9;
44:6; 47:14, 18, 22, 23, 24;
48:14, 14, 23, 25; 49:4;
50:3, 5, 6, 10; 57:7, 7;
68:22; 69:9, 24; 70:5;
71:18, 18; 75:3, 6
percentage 45:18, 20;
51:25; 56:3
perfectly 55:12
perform 10:14; 51:17;
71:9
performed 6:14; 7:3;
11:19; 67:2, 14; 68:15;
69:22, 25; 73:18
performing 78:7; 85:11;
90:22
perhaps 9:20; 28:18
period 8:21; 9:19; 30:10;
59:5, 8, 23; 60:23; 62:24;
63:1; 66:25; 73:2, 17; 74:1;
75:15; 87:6

periods 35:1, 3; 61:13;
67:3; 84:2
permissible 61:24
permit 29:10
persist 54:4
person 2:7, 17; 8:4, 7;
53:8, 9; 66:25; 68:15;
69:21, 25; 75:4; 87:5
person's 66:21; 71:14;
73:14
personal 12:18, 18; 13:5;
18; 37:16
personnel 35:11
perspective 55:14
persuade 79:3; 80:11
persuasion 79:21
Peterson 7:16
Peto 60:17
Peto's 79:22
Ph.D 3:6, 13, 20, 22
phase 12:13
philosophical 76:25
pick 2:15
pie 50:19; 52:18
piece 9:25; 35:13
pieces 11:12; 52:18; 90:1
pin 32:24
pipe 17:3; 21:22; 22:14,
19; 24:12; 27:12, 20; 28:2,
13, 15; 29:12, 23; 30:2, 21;
44:9, 20; 45:1; 51:12;
89:14
pipe/block 48:22
pipefitter 52:14
pipefitter/plumber
43:21; 44:5
pipefitters 52:25
piping 44:24
place 32:17
places 79:6; 84:13
Plaintiff 7:22; 8:6; 10:6,
16; 12:4; 13:24; 35:20;
80:3; 82:16
Plaintiff's 8:23; 9:6, 7;
46:14
Plaintiffs 82:8
plaques 43:23
plaster 59:7; 73:23; 74:22
please 2:15; 25:1; 54:10;
76:21; 82:22
pleased 32:17
pleasure 80:2, 3
pleural 43:23
plug 84:3
plugged 87:25
plus 13:22
point 31:14; 51:1; 55:11;
79:8; 81:22; 84:8, 14; 86:5;
88:13
pointed 24:3; 81:20;
85:10; 87:23
points 42:18; 50:7; 54:8;
77:9

pool 77:18
portion 60:13; 63:12;
66:11; 69:2, 5
posed 84:20
possibilities 51:13
possible 7:7; 14:9, 12;
36:17; 55:25; 82:18
potency 63:15, 18, 21;
64:5, 15, 19; 65:2, 8; 68:13
potent 55:24
potential 4:18; 10:9;
11:22; 24:15; 28:15;
33:23; 47:5
potentially 84:1
pounds 22:20
power 24:24; 40:6, 17;
61:2; 62:2
PPM 29:17
practice 3:24; 7:2
practices 24:22, 23
practitioners 80:10
pre 84:10
precise 36:19
precisely 47:11
precision 55:13
preconceived 33:17
predecessor 13:12
predetermined 36:1
preparation 13:1
prepare 10:23, 24
presence 21:11; 48:11
present 10:11; 16:16, 20;
28:4; 85:23
presentation 7:11;
15:24; 25:3; 79:14; 82:24
presentations 78:20
presented 4:20; 82:2;
83:5
presenting 7:19; 80:2
presents 2:1
President 3:10; 4:6
pressure 11:7
presumption 8:7
pretty 87:13
preventative 76:4
previous 51:11; 65:20;
67:5; 68:1, 12
primarily 16:21; 17:3, 23;
22:19; 53:2, 54:24; 65:1
primary 34:10, 14; 43:2;
44:16; 47:25; 49:5
principles 35:16; 39:10;
66:8
priorities 17:12; 86:8
prioritize 85:21
private 16:5
privileged 77:4
probability 6:23; 47:12;
48:7; 49:21; 71:16
probable 49:8
Probably 22:1; 41:17;
47:2; 48:15; 52:16
problem 33:24; 54:2

problematic 39:10
process 4:24; 5:12; 7:9;
18:7, 18, 19; 26:8; 31:7;
17, 23; 32:9; 36:24; 37:2;
40:24, 25; 41:5; 43:15;
45:15; 67:25; 68:19; 70:8;
14; 73:13; 74:11; 84:17;
85:1, 10; 86:6
produced 14:14; 72:20
produces 83:2
product 8:13; 15:18;
16:14, 16, 17; 17:3, 4;
18:23, 23, 24; 20:5; 23:16,
21; 24:17, 19; 30:25;
31:20; 32:10; 34:18;
37:16; 41:6, 25; 70:3;
73:12, 17
products 16:11, 14, 19;
17:25; 24:4, 9; 31:22, 25;
34:12; 39:25; 51:20; 73:18
Professional 2:25; 3:3;
4:5; 7:1; 32:6
Professor 76:22
Profiles 4:7; 27:4
program 3:16; 54:11;
89:6
progress 80:7
prolific 23:19
prompted 81:2
proportion 83:6
proportionality 58:9;
62:9
proportionate 58:10;
60:23; 62:1; 64:3
proposed 61:22
protection 15:3; 19:15
protective 37:17
protocols 20:9, 12
provide 50:13; 71:23
provided 30:8; 83:13
proximity 6:16; 68:15, 18
published 5:9, 11; 14:16;
19:2; 86:17
Pudget 89:20
pull 27:18
pulled 26:9; 88:24
pulling 67:19
purpose 8:5; 18:1
purposes 66:18; 88:14
pushed 58:6
pushing 36:3
put 11:4, 17, 18; 28:11;
36:14; 37:13; 39:16;
45:20; 47:11; 55:13;
64:18; 74:8
puts 45:24; 49:11
putting 73:21

Q

quadrillion 17:11
qualified 11:20
quarts 36:9

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et alTRANSCRIPT FROM AUDIO TAPES
June 27, 2002

quick 4:9
quickly 34:5
quite 10:8; 28:5; 39:24
quoted 23:9

R

R 11:20
raised 61:1; 62:2
random 45:13
range 6:1, 6, 22; 7:9;
13:21; 14:11; 34:8, 17, 17;
35:7; 38:1, 14; 40:2, 2, 7,
12, 18; 42:4; 45:20; 46:8,
23; 47:11, 17; 48:6, 12, 13,
17; 49:9, 25; 50:13; 51:13,
15, 16, 20, 21, 23; 53:18,
25; 58:20; 60:1; 61:1;
71:19; 72:7; 74:18, 20;
75:23; 88:10
ranges 33:4, 5; 34:9, 15;
36:19; 37:10, 11; 38:3, 17;
42:6; 46:15, 17, 19; 49:16,
24; 50:12, 14; 54:16; 63:22
ranked 72:12
Rasmuson 3:20; 32:14,
15; 54:14; 56:12; 59:13;
63:14; 71:16; 82:13;
85:18; 86:20
rate 11:8; 57:1
rates 53:1; 54:6
rather 33:18; 49:14; 81:6
ratio 20:16, 23; 58:4
ratio-to-lifetime 52:6
reached 58:18
read 64:10; 83:22
reading 29:16
readouts 79:17
ready 11:13
real 36:19; 90:10
realistic 26:11
realize 73:22; 79:10
realizing 68:24; 70:2
really 7:23; 13:25; 23:3;
28:6; 40:10; 50:1; 83:2, 10;
84:16; 86:6; 91:1
reason 24:17
reasonable 6:6; 47:17;
81:14
reasons 23:18; 24:13;
84:11; 86:3
Rebecca 5:18
recalculating 70:24
recall 90:4
receptor 4:12
receiving 90:13
recent 4:20; 14:4; 63:20;
66:23; 73:1
recently 19:25
recognition 41:1
recognize 11:24; 41:2;
80:10
recognized 77:17

recognizing 82:19, 21
recollect 12:5
recollection 81:1
recollections 12:3
recommendations
14:16
recommended 15:7
reconcile 7:5
reconciled 71:14
reconciliation 5:25
reconstruct 76:6
reconstructed 5:25
reconstructing 5:19; 6:8
Reconstruction 2:6;
4:10, 10, 17; 5:15; 6:3;
33:10; 56:22; 66:3, 7;
71:14; 73:10, 19; 84:16;
90:17
Reconstructions 2:2;
7:3
record 74:24
recorded 2:2
records 35:10, 11, 12,
12, 12
rectangle 47:13
rectangles 49:22
Red 5:9; 50:6
reduced 51:6; 92:11
reduces 50:21
refer 20:10
reference 6:24; 70:15, 17
referenced 75:8, 10
references 70:18; 72:21
refine 64:1; 72:15, 16
refinement 60:15; 63:13
refinements 62:3
reflected 71:1
regard 81:4; 90:11, 12
regards 27:14
Registered 4:5
Registry 5:16
regression 54:7
regrets 32:16
relate 36:15; 84:23
related 6:19; 37:19;
60:11; 67:11; 83:13; 89:7
relationship 62:8
relative 31:24; 33:9; 36:8;
39:8; 52:25; 56:7; 57:23;
58:4; 61:10, 14, 19; 63:9,
11, 21; 65:5, 14; 81:14;
86:11
relatively 8:10, 11, 19
release 24:18; 42:15, 17
releases 4:15; 56:6
relevant 13:10; 37:14
relied 26:10
relies 83:18
remember 9:20, 21;
13:24; 14:13, 20; 29:4;
47:11; 90:16
remind 33:21
removal 25:22; 26:14,

14; 48:21
removed 17:25; 24:22;
27:12
removing 17:23; 21:21;
27:20; 28:2, 10; 29:12;
30:2, 9, 11; 44:9; 49:7;
67:20; 89:13
removing/installing
26:7
rendering 40:16
renovating 67:16
renovation 67:12
repair 24:3
repeated 45:16
report 10:24; 72:20; 73:7
reported 6:20, 22; 19:11;
26:1, 14; 44:25; 45:2
reporting 6:19
reports 19:2
represent 69:13; 92:13
representative 88:20
represented 47:12; 50:7;
70:6
represents 52:1
reproducible 4:22; 38:20
requests 89:9
required 84:11
Research 3:17; 90:3
Reserve 88:9
respect 31:12; 32:21;
73:12
respiratory 15:3; 19:15
response 62:8; 77:7, 25
rest 22:22; 33:25
result 6:3; 27:7; 30:12;
47:23; 50:15, 22; 59:11;
72:14; 74:4; 88:3
results 12:8; 20:17;
21:14; 47:3; 52:14, 22;
54:22; 55:18; 72:5, 13, 15;
83:4
retained 9:10
retrospective 18:1, 25;
23:11, 23; 34:3; 54:19, 23;
77:3, 14; 78:1
reversed 77:25
review 18:11; 27:11
reviewer 3:18
right 9:9; 12:8; 47:19, 20;
86:20
rise 8:15; 9:4
Risk 2:11, 13, 14; 4:14,
19; 5:8, 10; 52:10; 54:22;
55:1; 56:7, 24; 57:12, 16,
21, 24; 58:1, 3, 4, 5, 7;
60:14, 16, 23; 61:8, 10, 14,
15, 19, 21, 23, 25; 63:9;
64:3, 21, 23; 65:5, 5, 12;
66:5; 84:16
risks 15:13; 81:14
river 17:12; 88:9
rivers 17:10
Rogers 7:16; 80:16, 16;
82:25

role 89:5
roll 14:22
rolled 11:15, 15
roof 24:8
roofing 24:5
room 2:12; 19:6; 22:21;
43:13; 47:19; 64:9; 90:6
rooms 22:22; 89:24, 24;
90:13
root 51:7
roots 77:4
roughly 50:9
Roy 7:15
run 64:20
running 51:2; 52:7

S

saber 12:9, 16; 14:13, 15
Safety 2:25; 4:5
same 5:12; 7:4; 15:12;
16:15, 16; 17:12; 19:5, 5,
6, 11, 17; 28:2; 29:18, 20;
31:21; 34:10; 37:21;
39:15; 43:9; 47:12, 19;
48:12; 52:21; 53:19;
55:19; 62:11, 24; 63:24;
66:2; 70:3; 74:11; 77:10;
81:3; 83:21; 86:12; 88:20
sample 11:13; 12:9;
13:11; 14:13; 20:4
sampled 74:23
samples 11:20; 12:12,
18, 19, 22, 23, 24; 13:3, 5,
16, 17, 18; 83:19
sampling 14:8; 19:16,
20; 20:9; 21:8
sanders 45:3; 48:11
sanding 45:5, 12, 19
Sanitarian 4:6
saw 9:17; 11:4, 5, 11, 17;
12:9, 16; 14:8
sawed 8:21
sawing 10:10; 12:19;
13:9, 20; 14:3, 10, 12, 13,
14, 15, 19; 15:8
saying 33:19; 79:24;
88:21; 90:21
scenario 18:9; 28:5;
31:10; 46:22; 59:18; 60:2
schemes 40:19
science 4:10; 74:8;
77:23, 24; 79:1, 2, 3;
80:12; 83:8; 87:23
Sciences 5:6; 40:21
scientific 4:22, 23; 18:6,
17; 32:9; 78:6; 83:14
scraper 25:22
Scraping 24:24; 26:15;
42:16; 49:10
scrapping 16:24
second 56:17; 78:19
sections 85:3
Security 35:12
seeing 12:5; 20:7
seem 16:10
seemed 41:22; 48:24;
75:11
seems 23:1, 19; 84:19
select 7:6
selected 31:18
selecting 21:17; 23:22
sends 32:16
sense 6:4; 10:12; 22:24;
32:8; 37:23; 52:12, 16, 19
sensitivity 51:2; 72:2, 9;
76:9
sent 11:20; 14:22, 23
September 2:15
series 67:16; 88:8, 14
served 30:21
service 27:18
service-connected
87:4, 20
session 2:10; 87:1; 90:24
set 11:13; 23:9; 24:20;
42:19; 45:17; 82:7
setting 27:5; 28:4; 57:8;
86:8
settled 10:5; 11:23
setup 42:23
seven 38:3; 47:10
seven-year 55:9
several 3:15; 36:20;
41:18, 19; 45:9; 58:11;
68:12; 85:25; 88:17
share 65:24
sheet 11:14; 71:2
sheetrock 45:24; 48:10
sheets 11:14
shift 63:8
shingles 59:9, 10
ship 22:12, 21, 22; 29:25;
30:1, 4; 31:4, 5, 6; 89:25;
90:6
shipboard 16:22; 21:19;
22:9; 23:9; 53:2; 89:22
ships 16:24; 22:15, 25;
30:6; 31:1; 43:13; 88:15,
17; 90:11
Shipyard 22:4; 89:3, 20,
21, 22; 90:15
shipyards 89:4
shop 9:13
short 83:19; 84:2
short-term 10:10; 38:23;
49:14
show 21:18; 23:24; 25:9;
47:4, 6, 7; 62:8; 66:2;
82:14
showed 23:6; 48:17;
53:5; 67:5; 68:1
showing 76:15
shown 60:19; 66:11;
71:2; 75:19, 20; 81:11
shows 53:11
side 19:24; 25:1; 44:25,

CONFIDENTIAL FROM ALL TAPES
ine 27, 2002

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et al

1; 50:5; 80:1, 1; 82:22
des 43:7; 55:22
ding 61:18
gnificance 12:3; 44:7;
4; 73:3, 11; 76:2, 7;
8, 15; 86:13
gnificant 7:24; 8:16;
10:19; 12:11; 14:2;
16, 17, 24
gnificantly 50:24; 72:5.

cate 10:2, 10; 12:6;
16; 14:10
nilar 19:3, 4, 10, 17;
8; 26:1, 2; 31:21; 39:3;
20; 59:8, 15; 65:20;
8; 80:22; 83:3, 4; 84:16;
10, 19.
nilarly 48:10
ple 40:18; 56:25;
17
plicity 86:3
plified 6:9; 29:8;
17, 21
plistic 59:18
ply 43:15; 53:6;
24; 90:14
ulate 42:16
ulated 50:6
ulation 10:14; 11:19;
45:7
ple 88:13
ple-valued 55:15
32:25, 25; 36:17;
5
s 33:1, 2; 44:6, 18;
86:9
ng 26:17; 56:15
ation 18:5; 31:14;
64:11; 85:6, 19
ations 35:21; 56:6, 7
1; 17:20
19:6; 89:4
ved 63:3
s 34:19; 49:25
g 50:18; 71:22; 85:3
36:25; 48:9
t 62:13; 63:8
tly 9:20
e 5:7
l 11:9; 59:21; 66:11;
83:11, 23; 89:3
ler 64:8
te 43:25
ted 43:24
ing 78:17
sized 39:22
lled 42:8; 51:8
l 35:11
ty 38:17
0:10
are 66:6
8, 12, 15

solution 33:23
solvent 36:7
somebody 42:16; 49:1
somehow 87:10
someone 25:19
Sometimes 34:9, 23;
57:25; 38:25; 47:19;
48:22; 49:2, 2; 51:9; 81:18
somewhat 12:17, 22;
42:3; 63:12; 64:2
somewhere 57:2, 5, 10;
58:19; 61:1; 68:21; 75:5
son 83:7; 87:17
sorry 29:3, 24; 57:13;
83:6, 7
sort 29:18, 20, 22; 36:8;
55:1; 56:8; 87:5
sorting 82:1, 4
sound 59:20; 89:20
source 4:12; 6:14, 16;
24:15; 25:12; 39:5, 15;
67:8
sources 27:1, 6; 31:6;
32:3; 36:20; 57:22, 23;
58:3, 5; 59:2; 70:10; 73:9;
88:24
space 43:10, 15
spaces 22:11, 16; 89:25
speak 90:25
SPEAKER 2:1, 5; 32:14;
54:12; 56:13
speakers 2:22; 65:20;
66:8; 68:12
special 7:25; 8:1
specific 8:12; 18:5; 33:6;
7; 34:18, 18; 41:21; 42:4;
56:6; 67:1, 17, 21; 68:2, 8;
70:2, 4, 18, 23; 74:14, 17;
75:8, 13, 24; 84:23; 89:10
specifically 6:20; 15:7;
67:9; 73:9
specifications 22:13
specificities 79:16
speculation 88:2, 4
spells 20:25; 21:1
Spencer 4:4; 15:23, 25;
25:4; 89:1
splashes 36:9
spoke 71:16
sponsored 2:10, 13
spray 45:3
sprayed 75:11
spreadsheet 37:13, 19,
22
square 51:7
stacked 8:21; 10:1
stacks 9:15
stagnant 42:12
stake 57:4
stakes 80:4
Stamford 3:17
stand 56:16, 17
standard 19:19; 24:22,
23; 25:8; 49:12, 20; 50:21;

51:6, 8; 82:7
standardize 36:4, 8;
38:15, 18
standardized 20:9, 11
standards 4:25; 21:15
standpoint 53:23; 76:4
start 66:13, 16
started 24:14; 44:14;
52:14; 53:23
state 80:9; 92:4
stated 10:19
statistical 76:9
statistics 72:1
stay 36:13
step 61:20; 70:14
steps 41:1
sticker 15:10
Still 11:1; 24:3, 9; 43:8;
79:19, 22
stop 66:13, 16
stopped 60:9; 74:2
Strategies 18:13
strengths 33:14; 82:21
Stretch 56:17, 20
strictly 90:20
structures 12:13, 14
studied 83:8; 90:2
studies 4:15; 5:5; 10:9;
19:12, 18; 21:25; 23:6;
24:1, 11, 13, 16; 26:1, 2,
10, 24; 27:2; 30:5; 48:4;
55:25; 58:19; 62:7; 65:22;
77:4, 8; 78:9; 83:22; 88:9,
15
study 4:2; 22:3; 23:10;
26:20; 41:7; 42:7; 48:1;
65:24; 83:22; 85:11
stuff 8:3; 14:20; 83:16
subcontractor 9:13
Substances 5:16
substantial 7:25; 8:16;
10:19; 14:2
substitution 15:18
subtract 62:5
suffer 86:12
sufficient 60:10, 10;
65:4, 7; 84:22
suggested 49:22; 78:11
sulfur 42:11
sum 58:2
summary 23:25; 26:13;
67:3; 68:3; 70:21; 72:20,
23; 73:5, 11; 76:8
summer 13:10
superb 80:8
Superfund 5:11; 86:9
superintendent 44:15
supplied 15:3
support 33:17; 55:25
supposition 88:1
sure 8:17; 25:5; 31:17,
20; 87:14
surface 36:10

surrounding 42:10, 13
sweeping 48:20
sympathies 87:18
symposium 2:13
system 73:22; 84:17
systematic 71:21
systematically 73:14
systems 42:25; 44:10

T

table 67:3
talk 22:6; 32:18; 33:13,
25; 34:2; 38:16; 41:7; 45:6;
51:11; 56:19, 22; 57:15;
65:18; 73:20; 82:19
talked 56:2
talking 20:13; 32:20;
34:22; 36:6, 24; 37:4;
38:13, 14; 39:25, 25; 40:8;
41:21; 43:8; 57:10, 12;
64:14; 77:22; 81:5; 86:5;
90:7
talks 40:22
tank 10:4
tape 54:10, 11; 82:23;
92:10, 14
taper/sander 45:22, 24;
46:7
tapers 45:3; 48:10; 59:14
task 6:18; 19:8; 25:16, 17;
26:6, 12; 28:25; 29:9;
31:19
tasks 17:21; 19:9, 10;
25:20; 27:19; 32:25;
89:22, 23
TCDD 54:23
team 4:7
Technical 2:19
technique 33:4; 45:13;
46:24; 51:16; 52:3; 56:5;
77:24; 85:12
Techniques 4:21; 7:1;
77:1, 15; 78:3; 81:19;
85:21
technological 77:12
technology 81:11;
88:10; 90:3
TEM 12:14, 15, 17, 17;
13:1; 20:5, 15, 20, 21
tempered 43:11
ten 16:7
ten-hour 69:11
tend 31:13
tendency 46:9
tender 59:4; 87:12
term 6:20; 39:6, 15
terms 12:3; 28:12; 36:15;
37:4; 39:15; 49:11; 64:23;
68:10; 69:9; 72:6, 20, 24;
73:4, 16
tested 13:15
testimony 10:24; 34:25;
35:9; 44:3; 88:19

Thanks 7:13
therefore 43:16; 67:4, 15
thermal 10:3
thesis 83:23
third 61:2; 62:2
though 53:5; 56:20
thought 56:16
thousand 57:1
thousands 86:1
three 12:12; 50:9, 14;
61:3; 83:13; 84:25; 85:25;
90:5, 7
three-quarter 75:1
three-year 55:7
threshold 78:10, 10, 11,
18
thresholds 77:16
thus 9:5; 24:13; 66:14;
69:13; 72:4
tie-in 48:22
tier 84:17, 21, 22, 25
tiered 84:17
tight 50:13, 16
tightly 11:15
time-weighted 26:23;
28:23; 40:12; 46:5; 49:17;
69:21, 23
timeline 7:4; 66:10, 21,
24; 67:25; 73:14; 85:3
times 6:10; 9:21; 14:11;
25:17; 29:13; 37:5; 45:16,
20; 47:20; 58:12; 83:19;
85:20
today 2:7, 22; 7:14;
10:12; 16:10, 24; 20:14;
21:6; 24:4; 26:17; 41:22;
56:24; 66:1; 77:22; 80:8;
83:13
together 15:4; 30:20;
35:6, 14; 71:5
told 8:1; 9:16
tongue 60:20
tons 21:22
took 12:9, 23; 13:16;
25:18; 27:10; 28:16; 49:8;
75:5; 83:4; 86:15
tool 40:6
tools 40:17; 44:25
top 36:11; 54:5
topic 56:21
total 12:13, 24; 27:22;
30:18; 31:3; 50:22, 25;
52:2; 57:24; 58:1, 5; 59:23;
60:4; 62:19; 65:23; 66:14;
71:1, 7
totality 78:22
totally 79:22
touched 34:4
toward 69:3
towards 34:1
tower 59:7
Toxic 5:15
Toxicology 3:22
tracer 42:7, 12

AMERICAN INDUSTRIAL HYGIENE CONFERENCE
& EXPO 2002, et al.

TRANSCRIPT FROM AUDIO TAPING
June 27, 2002

trade 24:22, 23
trades 41:20; 89:11
transcribed 92:10
transcript 92:14
transcription 92:14
transport 4:13
tremendous 86:17, 21
tremendously 55:10
tremolite 63:24; 64:18
trial 10:24; 44:3
triangular 48:7; 49:21
tried 39:3, 5; 42:16;
50:14; 54:1
trivial 8:20; 51:22
true 9:2; 28:9; 33:19;
92:13
try 33:17; 34:4; 35:3;
36:4, 5, 8, 14, 15, 23; 42:8;
50:20; 52:19; 55:16;
58:21; 85:13, 21; 86:13
trying 39:6; 85:6, 23
turn 25:1; 49:23; 82:22
turning 42:24; 91:1
TWA 38:24
twelve-hour 69:11
two 12:23; 16:19; 41:1;
48:23; 54:2, 8, 22; 64:22,
22; 65:19; 69:18; 79:4;
81:18; 84:22
two-and-a-half 60:5
two-thirds 13:4
tying 44:10
type 16:16; 23:15; 25:2;
28:4; 29:19; 30:25; 31:9;
32:8, 10; 33:15; 35:24;
36:24; 37:15; 51:17;
54:16; 55:19, 22; 56:2;
63:18, 22; 64:5; 65:8; 68:7,
10, 23; 70:3; 73:17; 79:19;
82:1, 8; 84:15
types 16:9, 11, 19; 17:1;
24:16; 25:11; 26:4; 31:9,
21; 32:1, 2, 5; 34:12;
44:22; 52:13; 63:15;
64:12; 68:13; 83:21
typewriting 92:11
typical 41:8; 46:5; 89:23
typically 6:22; 37:9, 10;
40:11, 17; 89:22
Tyvek 25:6

U

U.S. 5:10, 13, 17; 89:2
ultimate 72:22
Ultimately 6:2; 7:7;
25:20; 30:14, 18; 65:23;
85:4, 7
unable 2:23
unanticipated 4:20
uncertainty 33:9; 35:4;
51:14; 52:9; 53:14; 78:6;
79:13; 80:23
under 22:6; 25:10; 26:2;

30:10; 31:14; 42:12;
80:22; 92:11
undergraduate 3:8
understated 53:21
underway 30:6; 90:6, 11
unfortunately 2:7, 23;
19:22; 29:17; 90:23
union 35:12
unique 8:3
unit 11:4; 39:7, 15
units 11:7; 37:5
University 76:23; 83:8
unknown 39:5
unless 41:17, 18
unpublished 86:19, 21
unusual 65:25
up 2:15; 11:13; 14:21;
17:9; 20:22; 23:3; 24:20;
25:10; 29:17, 25; 30:14,
15, 18; 35:7; 36:12; 38:1;
42:5, 19; 44:14; 45:17, 24;
46:24; 47:2, 17; 48:20;
50:19; 51:19, 21; 52:6, 20;
54:16; 55:6, 8; 56:3, 16,
17; 63:12; 67:20; 68:24;
70:17; 71:22; 76:15; 85:3;
86:9; 88:11, 12; 90:25
updated 70:25
upon 68:18
upper 60:1
Uptake 4:3
upwind 43:6
urban 44:6
use 6:15; 7:6; 17:5; 19:19,
23; 20:8, 10, 21; 21:1, 3,
16; 23:12, 21, 25; 29:20;
31:25; 32:6; 36:5, 15; 38:6,
9; 39:14, 15; 43:17; 46:11,
15, 18, 24; 48:11; 50:12,
17; 58:9, 14, 23; 59:15;
60:1; 66:2; 70:6; 74:11;
78:2; 84:18
used 6:8; 7:1; 10:3;
11:21; 13:14; 14:7, 8;
18:14; 19:14; 20:14, 15,
17; 21:2; 22:4, 19; 23:15;
29:2, 3; 33:6; 39:11; 41:9;
42:11; 46:10; 47:16;
48:13, 14; 49:3; 56:7; 59:7;
61:3, 5, 21, 22; 62:12, 19;
63:4; 71:13; 72:21; 88:20;
89:15
useful 5:14; 37:12, 22,
25; 39:8; 46:8; 51:9; 53:20;
56:5; 77:15; 81:13; 82:3,
14
uses 15:8; 33:3; 85:20
using 19:18; 21:3, 7;
23:13; 24:22, 23; 34:11;
35:11; 38:9, 18; 39:9;
44:24; 48:7; 49:7, 23;
54:23; 62:15; 63:9; 64:1,
20; 65:21; 79:5; 84:14, 17;
88:12
USS 87:6
usually 15:11; 46:11, 15;

77:13, 20; 78:8
utility 53:18; 54:15; 56:1
utilizations 78:24
utilize 17:17; 68:24
utilized 32:9

V

value 66:14; 84:15; 85:14
values 37:19; 38:2, 25;
42:4; 43:1; 45:14; 51:15,
16; 84:18
valve 22:19
variability 33:12; 49:6;
53:4, 6, 6, 7, 8, 11, 14, 15;
55:3, 13, 17; 63:18; 71:11,
11, 12; 72:3; 79:7, 9; 84:5
variable 75:22
variables 72:8
varied 51:23
variety 22:1; 88:23
various 17:18; 31:24;
35:6; 38:8; 39:9; 42:19, 24;
46:2; 52:19; 59:25; 63:15;
72:19; 88:16; 89:10
vary 41:9; 68:17
varying 32:22
ventilation 19:5, 14;
24:21; 42:23, 25
veracity 88:5
vermiculite 59:7; 64:17,
25
version 29:9
versus 17:3; 21:12
vessel 27:17, 17; 28:1, 2;
30:2
vessels 16:23, 25; 21:23;
27:16; 28:8; 30:21
veteran 87:17
Veterans 87:2, 3, 19
vicinity 44:20; 45:3
view 84:15
viewed 53:3
viewpoints 46:13
vigorous 43:14
Virginia 86:25
visit 36:17
volume 12:24

W

War 87:17
wash 36:13
way 2:10; 7:4; 8:3, 24; 9:9,
16; 12:4; 14:17; 21:2; 29:7,
8; 37:24; 44:14; 70:24;
85:13; 87:18
ways 12:12; 35:10; 37:23
week 28:3, 6, 11; 37:4;
69:16, 16, 17; 75:6
weeks 69:18
weight 16:15; 55:1

weights 11:18
well-documented 22:2
weren't 24:11; 75:9
wet 36:12, 13
What's 10:19
what-if 46:21
whenever 36:17
whereas 30:25
White 18:15
whole 26:8; 36:11; 46:1
wide 41:10, 11; 46:17;
50:12; 61:17; 88:23
wider 43:17; 46:11, 18,
18; 50:15
Williams 7:16
wind 42:5, 22, 22, 25
winning 4:2
wire 24:24, 24; 26:15
wish 80:15
within 4:22; 37:10; 56:2;
57:3; 87:14
without 14:19; 33:19;
39:23
witness 9:12
Wonder 52:11
wondering 88:5
wool 25:8
words 7:25; 20:18; 32:22;
36:11, 14, 15; 47:16; 48:12
wore 25:6, 14
work 5:21; 7:21; 8:19;
9:8, 18; 10:8; 13:8, 9, 19,
25; 26:3, 15; 28:16; 31:19;
32:22; 33:15; 34:7, 19, 24;
35:8, 19, 24; 36:22; 37:4,
15; 39:8; 41:14; 43:9; 44:3;
47:15; 48:23; 53:2; 54:17;
55:19; 63:6; 66:17, 21;
67:18; 68:15, 16, 17;
69:25; 71:14; 72:24;
73:15; 83:20, 25; 85:2;
86:13
workday 49:13; 69:10,
11, 11
worked 9:13; 16:5, 22,
23; 17:22; 19:4; 35:20;
44:5, 14; 49:1; 59:1, 3;
77:6; 79:6
worker 34:10; 47:25;
49:5
workers 32:23, 23;
34:15; 35:15, 17, 22;
36:15; 52:13; 55:22; 56:8;
77:6, 8, 8; 84:1; 89:7
working 27:15; 28:6;
31:1; 34:18, 24; 35:18;
41:17; 42:5; 44:25; 45:2;
54:16; 67:16; 75:4; 89:5,
14; 90:18
Workplace 3:7; 18:4, 24;
35:10; 42:10; 79:7; 85:22
world 17:7; 60:18; 87:17
worried 17:9
worries 82:5
worst 18:9; 28:5; 31:10,

12; 53:3; 59:17; 60:2
wrong 9:9; 82:13
Wrote 11:22

Y

yards 41:19
year 17:18; 29:1, 14;
57:3, 11; 61:12; 62:22;
66:17, 17, 18
years 5:4, 5; 6:21, 22; 9:8;
13:23; 14:17; 16:7; 17:20;
21:25; 29:2, 5, 6, 13, 17,
17, 24; 30:16, 18, 20, 25;
37:7; 44:17; 51:24; 58:20;
59:4, 24; 60:5; 62:5, 21,
21; 66:15; 69:12, 14; 71:7,
18, 20; 75:17, 24; 77:11;
80:25; 81:7
yellow 26:20
Yes 9:25; 76:18; 81:8
yesterday 81:5
young 87:18

Z

zero 43:7, 7; 45:25; 51:24
zone 13:18